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ABSTRACT

In response to obsolescence of knowledge and increased need for continuing education, open and distance higher education formats for higher education are being developed in Europe. These formats use technological advances to make continuing education available. Many European Community nations have well organized systems of open university education. However, the investment in continuing education for adults is low. Distance education involves students working alone using materials developed centrally and distributed to home or work place. Open universities are not involved in research and the development of new knowledge. As it has developed, distance education has made use of more divers kinds of media and methods for instruction and an almost industrial approach to knowledge transfer. Much attention is paid to feedback in the design of materials and the organization of student support services. Organizational features are diverse and depend on national decision making processes. Modern technology will facilitate the development of a European network between open universities. Language teaching will receive special attention. A meeting of experts in distance education and training from European Community member nations met in 1990 to discuss their countries' national priorities and agreed at that time to contribute to a survey on priorities. Replies from 11 Member States are summarized in this report. An appendix lists facts and figures on open and distance teaching universities in Europe. (JB)

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COMMISSION OF THE EUROPEAN COMMUNITIES

SEC(91) 897 final

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REPORT FROM THE COMMISSION

OPEN AND DISTANCE HIGHER EDUCATION IN THE EUROPEAN COMMUNITY

HE 025 426

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0. INTRODUCTION.

0.1 Obsolescence of knowledge and continuing education and training

The information revolution, characterized by ever more powerful devices for storing, manipulating and retrieving knowledge, and controlling production processs, is rendering much previous education and training obsolete, or simply irrelevant. It is salutary to note that even if useful knowledge has a half-life as long as ten years, intellectual capital is then depreciating at 7%/year (which is a much higher rate than the recruitment of new graduates), with a corresponding reduction in the effectiveness of the workforce.

On these grounds alone it is necessary for industry to develop and adopt systems of continuing education and training to update existing staff: if, as appears likely, the numbers of young people emerging with new knowledge from initial education and training are inadequate despite many Members States Governments (e.g. recently France and Portugal) undertaking to increase numbers in higher education - the need for continuing education and training will intensify particularly for upgrading as well as updating the workforce(1).

"New" technology, particular in the areas of electronics, telecommunications and informatics, has created a growing interdependence between knowledge and economic life. There is now abundant evidence from many studies that economic growth and competitivity in advanced economies depend primarily on the ability to innovate with respect to product and process and that this ability is sustained by a higher level of knowledge and vocational skills among the workforce. In an essentially global economy it is necessary for Europeans to develop their skills and knowledge to the greatest possible extent if the benefits of the single market are to be realised and if Europe is to maintain its competitiveness with the other major developed trading areas.

0.2 Regional Factors

The skills requirement, under the pressure of demographic patterns, will put enormous pressure on education and training to increase qualification rates and to increase the size and effectiveness of the workforce by means of measures to upgrade existing skill levels and to increase participation rates both generally and in relation to under represented groups. Moreover, skills development in the less favoured regions of the Community is a critical factor for overall economic development, in particular for SME's. This is equally true for the rural areas of the Community, in particular the remote ones, in which, accessibility remains a major problem when designing a major training or retraining scheme(2).

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(1) IRDAC opinion on "Skills Shortages in Europe", page II

(2) SEC(90)479, Commission Staff Working Paper on "Distance Education and Training", paragraph 7.2

Access to higher education varies considerably between the Member States and even within individual States, between different regions. Generally the Southern and peripheral regions are not as well catered for as the central areas of the Community. The financial terms on which education and training is made available to young people are also very variable and represent both different traditions and different political choices from one Member State to another. Given the importance of higher level skills and knowledge to the overall progress of the Community it is important that the human resources of the peripherical regions be developed to their full potential. It is important too, that such development should not result in the transfer of resources from the regions to the centre and therefore it should be closely integrated with structural policies for the regions.

0.3 Continuing, Recurrent and "Second-Chance" Education

Progress has been slow in meeting the demands and needs of the working population and in moving towards equality between the generations with regard to access to higher education. Far and away the greater portion of higher education resource is devoted to teaching full-time students who enrol immediately after leaving school. With some notable exceptions "second-chance"education does not loom large in the higher education scene and the involvement of the universities, in particular, in continuing and recurrent education has not been significant. The growing necessity for involvement by higher education institutions in continuing education stems from the need to upgrade and update the skills and knowledge of the existing labour force during the coming decades. This need is also signalled by the demographic picture which shows that at present rates of participation in the labour force there will not be enough young people coming on stream to fill vacancies caused by normal retirements. Hence there will be a much greater dependence on adaptation of the existing workforce. A firmer commitment by the higher education institutions to continuing education would also permit of new balances of work and study for a range of school leavers, which many find preferable to wholetime attendance at educational courses. Such an arrangement would also have the merit of reinforcing the connection between higher education and industry, which would allow for a more ready dissemination of new knowledge and its more rapid application in the workplace.

0.4 The potential of Distance Education and Training

The traditional structures of higher education lack the necessary elasticity and flexibility to meet the varying demands for, notably continuing education and training in the coming decades. In particular, they lack the freedom from constraint of time and place which is necessary to deliver high quality education to the adult and working poopulation and education and training of sufficient range and variety to areas of low population density. Distance education and training can play an important role in resolving the issue of access by offering the advantage of flexible delivery. It may also, in certain circumstances be more cost effective than traditional education and have the added benefit of securing a better and more immediate synergy between education and working life.

1. BACKGROUND AND CONTEXT

1.1. Initiatives of the European Parliament and existing Community actions.

On behalf of the European Parliament Commission for Youth, Culture, Education, Information and Sport, Ms Winifred Ewing presented a report to the Parliament, in May 1987, on the Open Universities in the Community.

On July 10th 1987 the European Parliament adopted a Resolution on Open Universities in the European Community, including a great number of recommendations, directed at the Member States and the authorities, regarding support for the European Open Universities and their students (document A 2- 69/87). In the context of this resolution, the Commission was requested:

- to continue collecting and disseminating information on open universities through the EURYDICE network;

- to ensure that the open universities are involved as far as possible in Community schemes for cooperation in the fields of higher education and training, notably in the ERASMUS and COMETT programmes;

- to involve open universities in the development of advanced technologies for open and distance learning at European level, notably through the DELTA programme;

- to report in due course on existing and planned Open Universities in the Member States; and

- to investigate the feasibility of creating a European Open University.

The Commission as part of its efforts to promote initial and continuing higher education and training is supporting through existing Community Programmes initiatives in the fields of information exchange, course and credit transfer, joint course development and cost effective media technology among the existing distance teaching Universities. The Commission's wider interest comprehends the role of distance learning in the entire field of initial and continuing education and training and for this reason it has given support to existing European associations and organisations promoting the use of distance education and training as an integral part of initial and continuing training and, in this context, it has had special regard to the particular problems and needs of S.M.E.'s. The Commission is taking these initiatives through existing Community programmes, notably ERASMUS, COMETT, DELTA, EUROTECNET and more recently LINGUA and FORCE.
The Commission is also examining an initiative in distance education as part of the support to Central and Eastern European countries under the TEMPUS programme. It is also continuing to collect and disseminate information about distance higher education through the EURYDICE network.

1.2. Report on Open and Distance Teaching Universities

In its communication to the the Council, "Education and Training in the European Community - Guidelines for the Medium Term: 1989-1992" (June 1989)[3], the Commission expressed its intention to present in 1990 a Report on Open and Distance Teaching Universities.

1.3 The perspective of European integration

The impact of Europe 1993, creating the biggest single market in the world and involving 340 million people (including the former GDR), will increase the demand for growth in participation in higher education, will change fundamentally the distribution of high-level knowledge and will enhance the new civil right of mobility of citizens within the European Community.

Education should be supportive of mobility within the Community, not merely in respect of programme content through the inclusion of a European dimension, but also in facilitating access, movement and transfer across the boundaries of Member States. This applies, in particular, to the higher levels of education and to the facilities for continuing and recurrent education. The central theme of European educational strategy for the 1990's may well be that of widening access to and participation in continuing education and training throughout working life.

1.4 The Community programmes

1.4.1 The ERASMUS programme[4], which supports within a structured framework, the organised exchange of students and staff and provides also for staff visits between higher education institutions in the Community, has made a major impact on the questions of mobility and European cohesiveness. When the ERASMUS programme, was first conceived the objective was to ensure that between Community and Member State programmes it would be possible for 10% of students to have a recognised period of study in another Member State. The ECTS plan[5], which is part of the ERASMUS programme, is aimed at facilitating this recognition. The foregoing objective, however, even if attained, does not imply that the remaining 90% should be ignored insofar as the provision of a European experience within their higher education is concerned. There is a positive role for distance education in meeting this need.

(3) COM (89) 236 final
(4) Council Decision 89/663/EEC (O.J. N° L395 on 30.12.89)
(5) ECTS-European Community Course Credit Transfer System is an initiative aime at solving the academic recognition problems between Member States at individual course level as well as for study periods and intermediate and final examination.

1.4.2 Lack of facility in languages has been identified as the Achilles heel of the European Community and the greatest single obstacle to the free movement of persons. The LINGUA[6] programme will support the efforts of the educational and training systems in the Member States in increasing the linguistic competence of young people and employees all over Europe. It is obvious that distance teaching methods should be employed in this initiative, and the necessary programming requires further elaboration. The importance of the issue demands that appropriate action be taken as a matter of priority.

1.4.3 The COMETT programme has made an important contribution in the field of open and distance learning. COMETT II[7], notably, has a definite mandate to promote the cost-effective production of open-learning materials and courses for industry. It has a clear strategy, in this regard, of developing models for training partnerships between different open and distance teaching institutions and industry in the establishment of Europe-wide consortia.

1.4.4 The Open Universities are at the forefront of the cooperation with Central and Eastern Europe. An operational plan for the TEMPUS Scheme [8]has been developed at a Pan-European Conference held in Budapest, which was supported by the Commission. The establishment of European Study Centres in the major cities of the Central and Eastern European countries will be the cornerstone of a long-term plan of action.

1.4.5 The second phase of EUROTECNET[9], beginning in 1990, will build on the experience of " EUROTECNET I" in which the network of 130 demonstration projects has already provided extensive exchange of experience about the potential of distance instruction in the vocational training sector. EUROTECNET consists of a network of innovative projects in the 12 Member States. The network acts as a dynamic vehicle to exchange and transfer expertise throughout the

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(6) Council Decision 89/489/EEC on LINGUA - Community Programme to promote Foreign Languages Competence in the european Community - O.J. N° L239 on 16.8.89.

(7) Council Decision 89/27/EEC on COMETT - Community Programme in Education and Training for Technology - O.J. n. L13 on 17/1/89

(8) Council Decision 90/233/EEC on TEMPUS - Trans European mobility scheme for university studies - O.J. n. L 131 on 23.5.90

(9) Council Decision 89/657/EEC on EUROTECNET Community Program to promote innovation in the field of vocational training on Technological changes - O.J. n.L 393 on 30.12.89

European Community. Eurotecnet gives rise to actions concerned with revitalizing training (initial and continuing) policies and initiatives related to identifying new skill needs in the workforce in an era of technological change. Training methodologies based on distance learning approaches will also figure significantly in the further stages of the programme.

1.4.6 The FORCE Programme[10], adopted by the Council on 29 May 1990 with an estimated financial requirement of ECU 24 million for the first two year period beginning 1.1.91, aims to support and complement the policies and activities developed by the Member States in the area of continuing vocational training. It will also be concerned with the contribution which distance education can make to innovative training approaches for the adult learner in firms.

1.4.7 Through the DELTA Programme[11], the Community has been pursuing relevant research into the future potential of technological development for learning purposes. This research concerns, in particular, the cooperative development of advanced learning technologies. It is also concerned with testing and validating the operation of these technologies in terms of securing increased compatibility and transferability through the adoption of appropriate standards. Open Universities are active in 12 of the 30 DELTA projects which are underway.

1.4.8 The Third R&D Community Framework Programme covering the period 1990-94 was adopted by the Council on 23 April 1990 with a budget of ECU 5,700 million[12]. This Third Framework Programme provides for six main activities within which are a number of specific programmes. Continuing action in the field of distance learning will be supported within the activity entitled "Enabling Technologies" which has a programme dealing with the "Development of Information and Communications Systems of general interest" and also within the activity entitled "Management of Intellectual Resources" with its programme on "Human Capital and Mobility".

1.4.9 With the Single European Act, Articles 130 A and B of the EEC Treaty established "the strengthening of its economic and social cohesion" as one of the main objectives of the Community, and stressed the role of the Structural Funds in this process. The subsequent reform of the Structural Funds (Council Regulation 2052/88 of 24.6.1988) set the framework for the coordinated actions of the Funds, among which particular importance has been attached to the upgrading of human resources. The extent to which training coming within the ambit of Open Universities has been assisted by the Structural Funds could not be determined at this stage. The Regional and the Social Funds have, however, played an important role in the provision of higher education facilities where these have constituted a component of infrastructural development.

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(10) Council Decision 90/267/EEC on FORCE - Community Action Programme for the Development of Continuing Vocational Training - O.J. n. L 156 on 21/6/90

(11) Council Decision 88/417/EEC on DELTA - Developing European Learning through Technological Advance - J.O. n. L 206 on 30/7/88

(12) Council Decision concerning the Framework Programme in the field of Research and Technological Development on 8/5/90 - O.J. n. L 117/28

1.5 The Time Factor

1.5.1 Control of the time factor is one of the most important advantages of distance education. Such control is essential to providing a fertile ground for co-operation between economic life and education. This control can also facilitate citizens generally in fulfilling their public and private responsibilities while engaged in programmes of study.

1.5.2 Students who choose to study at an open university rather than at a traditional institute of day or evening education, usually do so because they have little time available and also because the periods during which they are free to study are often unpredictable.

1.5.3 Companies which allow employees to take time off to study are faced with the problem of how to cope with the resulting loss of direct production. Distance education allows people to combine studying effectively with continuing career responsibilities. Through distance education companies are offered the possibility of ensuring the essential recurrent and continuing education of their highly qualified workforce while being able to maintain acceptable levels of production and meet the varying demands of the market. They can thus invest in the development of their human capital while keeping costs under control.

1.5.4 The separation of education from institutional circumstances is an essential characteristic of distance teaching. Students are educated at a distance and at times and at a pace which best suits them, rather than in a classroom with a fixed timetable. They need not go to fixed learning environments, but receive the necessary facilities at home, or at work.

1.5.5 The production method of distance teaching materials allows the subject matter to be offered in clearly defined packages (modules), where subject matter and learning objectives form a close unit. A suitable media-mix and a number of didactic adaptations of the study materials replace the traditional teacher and the blackboard, and consequently the traditional unity of education and school.

1.6 The Distance Component

The soundness of the "distance" component in distance education depends on the didactic design of the materials, the degree of additional tutoring and guidance necessary despite the nature of the materials, the way in which tutoring is organized and offered, and the extent of the use of "telematics" in the media-mix. Existing forms of higher distance education in the European countries differ greatly with respect to these aspects. In principle however, higher distance education is classified with "open learning" in all countries because of a certain degree of freedom from constraints of time, place and pace, and a certain degree of modularisation of the subject matter.

2. THE OPEN UNIVERSITY EDUCATION

2.1 Europe-wide infrastructure

Many countries of the European Community have well organized and widespread system of open university education, as in the United Kingdom, the Federal Republic of Germany, Spain and the Netherlands. Ireland has a developing system and others, such as Portugal, Italy and Belgium are at an advanced stage of preparation. In July 1990, a report on the opportunities for a French Open University was presented to the Ministry. A preparatory Committee will be installed in the short term. Interesting examples can also be found among EFTA countries, as in Sweden and Norway. The scope of this paper does not allow an inventory of the situation in Eastern Europe[13]. Within the Community clear patterns and initiatives are absent only in Luxembourg and in Greece. The typological differences between countries in the organization of systems will be discussed in more detail later. Suffice it to state here that high-level facilities for higher distance education, available from southern Italy to northern Sweden, together with those which are at the developing or preparatory stages, provide, in principle, the infrastructure for coordinated cooperation on a wide scale. A proper distribution of local and regional study centres, many of which are already established or available in rudimentary form, would bring distance higher education within reach of practically every region and all groups of society within a united Europe.

2.2 Continuing education

2.2.1 In Europe the investment in continuing education for adults and its uptake are relatively low. This constitutes a very real problem on account of the rapid rate of technological and product innovation and also because the base of the population pyramid is getting narrower rather than wider. The rate of technological innovation contributes to obsolescence of knowledge and redundancy of skills and consequently causes severe wastage of human capital. Demographic figures, especially in northern Europe, show an increase in the average age of the workforce. The working population is ageing. Many institutions in the labour market fail to take sufficient account of new knowledge demands related to new production processes and new goods and services. The IRDAC[14] opinion, "Skills Shortages in Europe" has this to say in the matter.

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(13) Proceedings of the Budapest Conference, on Distance Education on 2 - 5 May 1990 at the Technical University of Budapest, cofinanced by the CEC

(14) IRDAC : Industrial Research and Development Advisory Committee of the European Community Opinion on "Skills Shortages in Europe" - ECC, Nov. 1990

"The information revolution, characterised by ever more powerfuldevices for storing, manipulating and retrieving knowledge, and controlling production processes, is rendering much previous education and training obsolete, or simply irrelevant. It is salutary to note that even if useful knowledge has a half-life as long as ten years, intellectual capital is then depreciating at 7% /year (which is a much higher rate than the recruitment of new graduates), with a corresponding reduction in the effectiveness of the workforce".

2.2.2 At the same time, government intervention in the field of continuing education usually lags behind the support for primary, secondary and traditional higher education. Europe has some catching up to do in respect of investment in distance education. Looking at other parts of the world, we observe a rapid increase in (higher) distance education in South-East Asia where various developments are in receipt of financial support from Japan. The position in South America has been highlighted at a major conference of the International Council for Distance Education in Caracas, Venezuela, in the autumn of 1990. When making comparisons with the United States, the traditionally larger participation rate in post-secondary education and the wide distribution of Colleges, including Community Colleges, should be taken into account. The number and variety of providers of alternative educational services have nevertheless increased dramatically there. Colleges in the United States today provide only about a third of the organised learning opportunities for adults.

3. CURRENT SITUATION AND PERSPECTIVES

3.1 Institutional Characteristics of Distance Teaching.

3.1.1 Distance teaching implies that students work without the continuous and immediate supervision of teachers and need to meet only occasionally with a teacher in face to face contact. The teaching materials are designed and produced centrally. They are then distributed to home, to workplace, or to learning centre. The students are thus given freedom of time, place and pace. Much of the teaching effort is incorporated into the design and structure of the teaching materials themselves.

3.1.2 Teaching and learning are however, parts of a highly interactive process. For successful completion of their studies, students depend on the feedback they receive from the learning environment. At first sight "distance" and "interactivity" are mutually incompatible. High-quality didactic design is therefore essential in distance education. In addition to the professional and academic standards of the course contents the materials themselves have to incorporate a feedback element and this element is a determining factor in the quality of the materials. Instruction psychology, knowledge of different learning styles among students, and also the use of information technology constitute the tools for the production of distance teaching.

3.1.3 Carefully designed didactic concepts are at the core of the business of open universities and similar institutions. Inadequate didactic design results in poor quality materials and in second rate distance education. On the other hand, well-designed didactic concepts are part of educational innovation and may also benefit traditional educational institutions.

3.1.4 Distance education cannot serve wholly as a replacement for institutional education for the following reasons:

Firstly, the necessary didactic knowledge in some applications is as yet insufficiently developed to match the quality of knowledge transfer in the traditional environments of school or university;

Secondly, it is much more difficult in distance education than in traditional education to create the social environment that is conducive to organized learning. This is one reason why distance education is generally more suitable for adults than for young people, more applicable to higher than to lower levels of education, and used more in continuing education than in primary or in non-vocational secondary education;

Thirdly, distance education makes much greater demands on the student's motivation and capacity for independent learning than traditional education. This highlights the importance of external social incentives, such as the chance of a job or a promotion, to the students possibility of success in distance education;

Fourthly, the relationship between costs and benefits differs from one case to another when distance education and traditional teaching methods are compared. This relationship depends largely on the ageing rate of the knowledge transferred and the number of students and other clients. Distance education depends heavily on economies of scale.

3.1.5 On all four points market and policy will determine in each case whether traditional education or distance education offers comparative advantages. The social parameters within which this choice favours distance education have already been discussed in the first part of this document.

3.2 Contrast to Traditional Universities

3.2.1 Traditional universities are deeply involved in the production of new knowledge. In addition to their educational task they have the accompanying mission of scientific research, both fundamental and applied. The open universities do not aim to compete with the traditional universities in this field. As institutions they are not always as well suited, or as well equipped for this purpose. They, therefore, often seek the co-operation of the traditional universities in furthering the transfer of new knowledge to large sections of society and maintain a research environment of their own only sufficient to permit academic staff to stay up-to-date and to maintain contact with the scientific community. This is necessary in order to guarantee quality of content in the teaching materials.

3.2.2 In addition to the provision of higher education to qualified school leavers and others, principally on a full-time basis, and the conducting of research, traditional universities also provide educational and training services to society in general, involving the transfer of knowledge on complex issues. They have not, up to now, been particulary active in the field of continuing and recurrent education. The growth in demand for higher education, in all of its forms, poses serious problems for the traditional universities, which are constrained not only by lack of physical space, but also by the relatively inflexible nature of traditional didactic methods. The importance attached to scientific research in relation to academic prestige and career progression within the traditional university system means that academic personnel are drawn more torwards research and the study of various scientific specialisations rather than to the design of flexible teaching programmes to meet new educational challenges.

3.2.3 The primary task of the open university is the transfer and application of knowledge. It is not constrained by the traditional restrictions of classroom, or time-table. Didactic quality and the optimal use of didactic tools are its hallmarks. The programmes and modules are constructed with a view to the transfer of a well-defined and coherent set of knowledge items and skills, including the ability to make use of scientific argumentation. The design is such as to facilitate self-instruction to the maximum possible extent. The academic education of open university students is not any way inferior to that of students in traditional universities. The programmes are, however, designed with a stronger bias towards the practical application of knowledge in social and working life and with a lesser orientation towards research than is the case at traditional universities.

3.2.4 The range of open university courses tends to be very wide and to embrace both purely academic studies on the one hand and what may be described as applied studies, or higher vocational training on the

other. The binary divide present in institutionalised higher education, is not yet reflected in "open" distance education systems. The German Fernuniversitaet, for instance, has therefore been legally defined as a "Gesamthochschule". The open university is not, and does not seek to be, a replacement for the traditional university. Each has its own primary task and advantages. Within the framework of higher education as such, the expansion of distance higher education will create a new balance of complementary relations between old and new forms.

3.3 Media and Methods

3.3.1 In Europe most of the materials produced for distance higher education have come from the large producers, the open universities of United Kingdom, Spain, Germany and the Netherlands. In these also resides the bulk of the experience gained in the design and operation of open learning systems. One of the interesting smaller producers is the National Distance Education Centre in Ireland, part of Dublin City University. Each of these has given its own particular interpretation to the concepts of interactivity and feedback in the distance teaching process. The design of courses and systems is moreover constantly evolving by means of experimentation and continuous assessment. A distinct common denominator can be discerned between the products of all producers. The variations stem from differences in available means and different cultural traditions and ideas.

3.3.2 The history of distance education in general shows that the first phase of its evolution was characterised by the use of one medium of delivery, sometimes complemented by support services for students. The prevailing medium was the printed word, as in the case of correspondence schools, but radio and television were also employed (Japan). The second phase in the evolution was introduced world-wide by the foundation of the British Open University and is characterized by a wider range of interrelated media. The British concept which has been widely followed, with minor local adaptations, has always been based on using a combination of centrally produced written materials divided into units, localised tutoring and counselling services and radio and television broadcasts. Computer-based learning materials have now been added.

3.3.3 This latter development illustrates the growing interweaving of didactics and information technology. More advanced examples would, in principle, allow a quantum leap into the third phase of the evolution of distance education. This will be characterised by a completely open and multimedia conception of both production and delivery, with a range of didactic alternatives. Distance higher education in Europe is at the beginning of the third phase in its evolution. In this third evolutionary phase, with complete multimedia openess, students will be able to choose individually the mix of media and teaching aids that best suits their learning style. Distance teaching will then be truly synonymous with open learning.

3.4. The Industrial Approach to Knowledge Transfer.

3.4.1 In comparison with traditional universities, open universities adopt almost an industrial approach to the transfer of knowledge. The production of courses and the additional study support contain elements of serial sequencing. The distribution of courses resembles the organisation of a mail-order company. The dean, or vice chancellor, or chief executive of an open university is, on the one hand, a representative of the academic guild and, on the other hand, very much a manager of a large and complex enterprise. The academic community occupies a differen position in the entire production process than is the case in traditional universities. The open university has a large number of functions that cannot be found in traditional universities. At the British and Dutch open universities, for instance, courses are made by joint course teams, comprising educational technologists, editors and others, as well as academic staff.

3.4.2 The production of distance higher education depends on team-work. The integration of the academic culture and a company culture, while respecting the professional autonomy of the partners, is a specific task for open universities. An open university is an industrial enterprise and distance higher education is a New Industry. This enterprise has to sell its products on the market for continuing education, which is subject to the laws of supply and demand. There is continuous competition with the traditional institutes of higher education and with in-house company training schemes.

3.5 The Impact of Information Technology.

3.5.1 The revolutionary possibilities of developments in information technology for the practice of distance teaching, especially in combination with telecommunications (telematics), have been pointed out above. In reality the predictable impact will be one of a gradual evolution rather than a revolution. The institutes for distance higher education are right in basing their telematics policies on educational pull factors rather than technological push ones, despite all the hype about media and technology. As far as policy is concerned, new possibilities in information technology will not always live up to important criteria such as teaching effectiveness, accessibility to students, and cost comparison. An open university or similar institution as an integral electronic university concept is unrealistic.

3.5.2 The placing of any unjustified obstacles in the way of balanced intertwining of developments in distance education and progress in telematics must nevertheless be avoided at all costs. There are significant gaps in distance higher education in the area of pedagogic empathy and in dialogue/direct communication between student and tutor for which bridges may be found in the applications of telematics. Open universities should experiment on a wider scale with "virtual classroom" electronics as a means of overcoming communications problems and of making better provision for the interactive mode of teaching. While examples of such applications may arise spontaneously in the open universities own laboratories, European demonstration projects could also fulfill a particularly useful role.

3.5.3 A comprehensive overview of the state-of-the-art in the use of media andtechnology in distance higher education in Western Europe, with the exclusion of in-company training, has recently been published[15] by the EADTU[16] in Heerlen, the Netherlands.

3.5.4 There is little data available on the costs of the latest technologiesin distance teaching. An important issue from a social point of view is the fact that technology-based media can bias participation in favour of economically advantaged consumers, although the level of equipment and geographical distribution of local study centers may help to counter-balance this effect. Availability of Home-computer facilities and access to satellite communication differ tremendously from one country or region to another and between groups in society. For in-company training, such as is accomplished in EuroPace, the balance tips the other way, but even here there are major differences to be noted between large companies and small and medium-sized businesses.

4. FEEDBACK AND STUDENT SUPPORT SYSTEMS.

4.1 Much attention is paid to feedback in the design of distance teaching materials and the organisation of the student support service. The teaching materials are interspersed with frequent tests and evaluations which allow students to assess their progress and discover any gaps in their knowledge in good time. The British Open University and the Irish Distance Education Centre, in particular, also apply a system of regular compulsory written assignments which students send to their tutors at specific intervals.

4.2 In keeping with national traditions, the Spanish UNED divides the materials into study years, the German FU assembles them into Semesterwochenstunden, the British OU supplies them as courses covering a study load of a half or a full semester, while the Dutch Open University offers modular courses of 50, 100, or 200 hours of study load.

4.3 In addition to the delivery of packaged teaching materials all European open universities, including those that are at present being set up, offer decentralised study support. They have at their disposal a network of study centres spread across the service area. The German FU, for instance, has a policy of establishing and managing its own study centres, whereas the Spanish UNED uses relatively autonomous centres in which local institutions such as city councils, or banks participate. The Belgian centre for distance higher education uses the services of geographically distributed institutes of higher education. The study centres provide support in the form of tutoring and counselling for students, complementing the written and telephone communication between supervisors and students.

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(15) Media and Technology in European Distance Education, ed. Prof. A.W. Bates, Milton Keynes 1990

(16) The European Association of Distance Teaching Universities (EADTU) established in 1987 by the Principals of the European Open and Distance teaching institutions of higher education, is providing a structure for multilateral collaboration, in particular in the fields of course and credit transfer, joint course development and the development of new educational technology for higher distance education. Information on the EADTU's Membership is given in the Annex.

4.4 Distance higher education is faced with the paradox that the requirement of physical attendance in order to receive tutoring and guidance would seem to violate the principle of freedom of time and place which is the hallmark of distance education. On the other hand student support services constitute an indispensable complement to packaged learning materials in order to ensure interactivity and feedback. In the third evolving phase of distance education, characterised by increased use of electronic means, there will no doubt be new options for the solution of this apparent contradiction.

4.5. The Canadian open university in Athabasca, with its widely distributed student population, has already adopted tele-conferencing. The European open universities still have different approaches. Attendance at regular study meetings and at examinations is a compulsory requirement of all courses offered by the German FU. Examinations are even held centrally at the headquarters in Hagen. The Spanish UNED uses looser links between the teaching materials circulated from Madrid and the service offered in the study centres, allowing students a considerable degree of freedom. The British OU has integrated a high degree of tutoring at which attendance is mandatory into its structure, with written and, often, computer-graded assignments playing a key role. This is considered essential for pacing purposes. The British OU also values residential elements and attendance at summer schools is often compulsory. The Dutch Ou is somewhere between these extremes.

5 ORGANISATIONAL FEATURES

5.1 Integration of course production and delivery

The organisational features of distance higher education in Europe are diverse and are dependent on national decision-making processes. They can nevertheless be divided into three categories.

5.1.1 The first category is one in which the open universities are established as separate institutions and where educational production and delivery constitute an institutional unity. This is the case in Germany, the Netherlands, Spain and the United Kingdom. Ireland and Portugal are, each in its own way, moving in the same direction.

5.1.2 The second category consists of consortia, where national agencies control a collaboration of traditional institutes of higher education which have adopted distance education. This is the direction in which Italy is heading with the CUD, and Belgium too, at least in the case of Flanders, as may be seen from the proposed legislation.

5.1.3 The third category comprises countries like Denmark and France, each with its own unique position. In Denmark most of the traditional universities provide distance higher education as an extension of their primary tasks. In France there are more than twenty

traditional universities providing distance education in one, or more disciplines. This resembles the situation in Sweden. France still lacks an epicenter for coordination and production though such a centre is now proposed. The university departments for distance education have formed a loose federation for the exchange of data and the promotion of common interests. As distance education plays only a marginal role in the traditional universities and some of the university units in question in France suffer from budgetary difficulties, we witness the paradox of a "numerus clausus" being applied to distance education, which was meant to provide open access and apply economies of scale.

5.2 Course production versus course delivery

There are also examples of institutional division between course production and course delivery. EADTU and EuroPACE[17] (Paris) might be considered as multinational agencies for both course production and course delivery on a Europe-wide scale. EuroPACE concentrates on advanced upgrading programmes, using short courses for big enterprises, notably in the technological sector, and EADTU covers, in principle, most of the academic subject areas but, at the moment, pays special attention to management studies, European law and humanities. EUROSTEP[18] are SATURN[19] are European networks for the marketing and delivery of distance education to a variety of clients, with, in the case of SATURN, a strong emphasis on SMEs.

6 MODERN TECHNOLOGY FOR COURSE TRANSFER, JOINT COURSE PRODUCTION

6.1 In the development of a network between Open Universities, course transfer and joint course production between national institutes are major priorities. At first sight joint production projects on a European scale would seem to demand the highest level integration of new technologies, with a view to their stimulative and exemplary effects. The tremendous differences between the various national and regional facility levels could, however, lead to such action being counter-productive. For the core course materials the medium of the printed text, possibly complemented by terrestrial broadcasting, still predominates and this is what that will first present itself as the major common denominator in inter-European collaboration projects.

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(17) EUROPACE is a group of high technologies companies and universities developing satellite-based continuing training for companies

(18) EUROSTEP, the Association of Users of Satellites in Training and Education Programmes, brings together the OLYMPUS satellite users for training in large and small companies and for education

(19) SATURN is an European partnership of open and distance teaching universities allied with companies, notably SME's, to advise on and assist in quality distance learning approaches in continuing training in advanced technology areas.

6.2 To push such projects to the technological forefront, large-scale supra-national investments in harmonisation and standardisation of hardware and software would be required. Without such a programme technological innovation will be restricted to variations of national delivery systems transporting the centrally produced core courseware. A supra-national development programme in a small, area such as that of language teaching through distance education methods, could nevertheless be possible.

6.3 An interesting example of an innovation in information technology which has considerable potential for the input side of joint course production is the feasability study which is being carried out under the DELTA programme into the Joint Academic Network using Satellites (JANUS) by a group under British management. This network should provide "inter alia", two-way voice communication between any two sites, audio-conferencing across all sites for joint course team meetings, computer-conferencing facilities and video-conferencing facilities, and all of these operative across national boundaries. The network requires the development of a unique European designed "mesh" earth station capable of working with a European satellite. Such a communication system could reduce the costs associated with conventional communication and avoid the considerable outlays of time and money in travelling to meetings. It could also help overcome other obstacles to communication between the members of European joint course teams. A positive side effect could be that of gaining important insights into transnational tutoring services.

6.4 The major challenges for the forms of distance education that make extensive use of new technologies and therefore have a higher interactivity value can be summed up in a few keywords. Experiments in this field require financial support in order to ensure that the existing organised public open university education systems can exploit the potential of the third evolutionary phase. The coming phase of the DELTA programme will support pilot experiments focussing on the potential of new technologies for open and distance learning. Possible areas for experimentation are:

- in addition to the two-way voice and datacommunications, the development of Integrated Services Digital Networks (ISDN) which is currently underway world-wide. The capability to transmit voice, data, facsimile and slow-motion video simultaneously on a single telephone line offers completely new theoretical and practical possibilities for the organisation, nationally and internationally, of student support services;

- artificial intelligence, in combination with intelligent tutoring systems and in relation with, for instance, text production through hypertext procedures. An established and accessible knowledge system could be surrounded by "didactic shells" for self-tutoring by students and for a new type of interaction between teaching and learning at a distance;

- The results of such experiments will have to be continuously evaluated with regard to aspects of cost, teaching effectiveness and accessibility.

7 LANGUAGE TEACHING

7.1 Language teaching at a distance has already been mentioned as an interesting area for development involving content and methodology as well as the experimental application of differenttechnologies. Europe 1992 and increasing mobility within the single market demand that as many citizens as possible should have a command of at least one community language besides their mother-tongue. Mobile workers should also be enabled to learn quickly and effectively the language of the country to which they move. This position is strongly supported by the exhaustive arguments put forward in connection with the establishment of the LINGUA programme.

7.2 Distance education is seen as offering comparative advantages in the area of language teaching. As well as providing for students within the distance education system itself, it can also be seen as supporting the language learning efforts of students in higher education institutions and in secondary schools. Language skills in themselves, provide only limited vocational opportunities, but when combined with other skills and qualifications they are a key to exploiting theopportunities of the single market.

7.3 It should be a priority for the institutes for distance higher education in Europe to develop and provide short-cycle language programmes at the post-threshold level. Such programmes would serve both the adult working population and students of engineering, business and other disciplines as well as providing particular support for the teaching profession. In this connection EADTU has made an inventory of existing facilities and has conducted a feasibility study. The results of the inventory show that examples of language programmes in public distance higher education are few and far between. Apart from specific efforts made by the Spanish UNED and the French institutions the language market is served primarily by private providers, resulting in considerable proliferation and problems of quality.

7.4 The EADTU study has produced an important modular model for the selective production of distance higher language education, bringing together the different language skills and the various competence levels according to the linguistic literature and the different potential target groups in one framework. This framework allows both for short courses and for more elaborate programmes.

7.5 It is not surprising that the open universities and similar institutions have not, in general, been very active in language teaching. It is a high-risk business, not only because of the presumed, or real competition from private providers, but also because of the level of difficulty. Foreign language learning requires a higher level of interactivity than many other areas of organised learning. Consequently, even in distance education the demand for face to face contact is very great, a factor which has discouraged open Universities from getting involved in this area. This is the reason why the emerging new technological communication methods have been experimentally linked in this paper to the need for language teaching. In the wake of the EADTU report there could be a study, in the framework of the LINGUA objectives, to establish what specific action could be taken and what possible joint ventures could be initiated in this field.

8. NATIONAL PRIORITIES FOR THE DEVELOPMENT OF OPEN AND DISTANCE EDUCATION AND TRAINING

In order to consult the Member States concerning a Community initiative in the field of distance education and training as requested by the Council on May 31 1990, a meeting of high officials, with expertise in distance education and training, was held on October 1-2 1990. At the meeting, the national experts agreed to contribute to a survey on priorities of the different Member States in this field. Replies on the survey questionnaire had been received from 11 Member States (Luxemburg did not participate in the meeting), which provided the following information.

ITALY

On the higher education level the Consorzio per l'Universita a Distanza (CUD), was established in 1984, as a consortium between the Ministry of University and Scientific Research, the major universities, major private industries and the RAI-TVI (radio-tv). In 1990, the government presented a Bill to the Parliament establishing new rules on education, adopting formally distance education as an educational method for Italian universities and creating a central co-ordinating body. The Ministry is funding the investment as well as the working costs (1990 : 60 MECU). Important priorities for the 90's are course delivery (full curricula and continuing education) directly at the student's home, instead of the work place or study centres (via satellite or electronic networks) and research in the field of educational technology. There is a great interest for Community initiatives in this area.

BELGIUM:

The Flemish Community (Ministry of Education) established in 1987 the Study Centre for Open Higher Education (STOHO), which is collaborating with the Flemish universities and the Dutch Open University. It is seen as a provisional solution until the new Government Bill on Open Higher Education has been approved. In this Bill the creation of a Consortium is envisaged which includes the higher education institutions and provides for collaboration with the social partners.

The French Community has a public service, based at the Ministry of Education, for secondary education by correspondence. It is also offering courses for the preparation for the Public Service examinations, and some vocational and continuing education training courses.

Priority is given to new course development to meet public demand. There is a great interest in development on a European level in the field of distance education and training.

DENMARK

The Danish law on open learning (1989) promotes in particular higher and vocational training. A Task Force in the Ministry of Education supports experiments in vocational and continuing training in collaboration with industry, educational institutions and the social partners. The priorities are the establishment of a better scheme for continuing education in enterprises, and the development of a system for flexible education to secure better qualifications of the work force at large.

SPAIN

From 1972 onwards, the Universidad Nacional de Educacion a Distancia (UNED) has been teaching regular university programmes as well as special courses for professionals. Formal primary and secondary (distance) education for pupils in isolated areas and for disabled students is provided by CENBAD (1979) and INBAD (1978). The private ECCA foundation provides, with State support, basic education for adults by radio. UNED courses are also delivered abroad, notably in Latin America. Priorities for the Spanish Government are the reinforcement of existing national networks and infrastructures for distance education, more flexibility of course offerings to meet new skill needs, vocational training for adults and continuing education for employees.

UNITED KINGDOM :

The main national initiatives in the past 20 years have been :

- The Open University (1971), with undergraduate programmes as well as a wide range of continuing education courses;

- The Open College (1987) to bring training to a mass audience using open learning materials and to provide also other open learning services (training needs analysis and company specific training schemes).

- The Open Technology Programme as a four year developmental programme (1983-1987), aimed at employees in industry, and generating a supply of distance learning materials. It gave an impetus to the vocational open learning market by promoting open and flexible learning methods for industry and commerce.

- The Education Support grant, funding the local education authorities to support the development of open and distance learning.

The use of open and flexible learning is encouraged in all government training programmes. The UK government has a firm belief in collaboration and partnership between the public and private sector, including education and training, such as Training and Enterprise Councils (TEC's), training Access Points (TAP's) and the Professional, Industrial and Commercial Updating Programme (PICKUP). The UK national priorities for the 1990's are:

- consolidation of the TEC's;
- access to information resources for distance learning;
- ensuring and encouraging high quality in open learning and related support, including learning technologies;
- dissemination of good practice in open and flexible learning;
- consolidation of the Open University and Open College as cost effective providers of open learning;
- encouraging these providers to expand their international activities.

NETHERLANDS :

The Dutch "Open Universiteit" which received its first students in 1984, was based on a special law, establishing it as an institute for open university as well as for higher vocational education, equivalent to the regular higher education. In 1990 about 45.000 students were enrolled, of which 50% would not be studying at all without the OU provision. In the field of non-university adult education, local and regional initiatives for open learning are supported by the Ministry of Education, pending legislation in this field.

A special programme for the study and development of new media in education has been launched by the Ministry of Education, including telematics, interactive video, CD-ROM. The steering Committee for new media acts as a national counterpart for DELTA. National priorities are the completion of the Open Universiteit, as well as the creation of a national system for flexible/continuing education for adults. The internationalisation of higher education is also an important policy objective.

GERMANY :

In Germany initiatives on distance education and training at the differents levels exist on the level of the Laender, often in collaboration with universities (e.g. the Deutsches Institut fuer Fernstudium Tuebingen), with broadcasting companies (Telekolleg, Funkkolleg), with social partners and Chambers of Commerce and Industry.

Rheinland-Westfalen supports the Fernuniversitaet, a complete distance teaching university within the regular university structure. Priorities in Germany are the introduction of new media-technology, the improvement of training in SME's, the spread of knowledge on Europe 1992 and the promotion of language skills.

GREECE :

There have not been any governmental initiatives up until now in the field of distance education and training. However there is currently a reflection going on among academic and administration circles on how to best take advantage of the European developments in the field, aiming specifically at continuing education and training.

PORTUGAL :

During the period 1977-1980, the government provided, with support of the trade unions a special distance course for upgrading basic and secondary teachers. About 40.000 students a year were enrolled. Subsequently, the Universidade Aberta started as a pilot project; it was formally established in 1988. The Universidade Aberta offers formal courses in Education Science, French and Portuguese Studies, as well as post-graduate courses in Multimedia Educational Communication. It also collaborates with industry and other partners in professional training. The Universidade Aberta diplomas are equivalent to the ones of the regular universities. Portuguese national priorities for the coming years are continuing education and training, the expansion of higher education to broader sections of the society and the promotion of interuniversity co-operation.

IRELAND

In 1982, the National Distance Education Centre was established to provide worthwhile qualifications to adults all over Ireland, regardless of location or previous qualifications and as a second chance for those who had not previously participated in third level education. It is based at the Dublin City University, under the auspices of the Ministry of Education and funded by the Higher Education Authority. In 1985, the Ministry of Education launched the National Distance Education Council, including representatives from all the universities, industry, trade unions, the National Broadcasting Company and various educational institutions. The priority for the 90's is the continued expansion of the National Distance Education Programme with particular reference to the fields of management, information technology, humanities and advanced continuing education.

FRANCE

Distance teaching and multimedia approaches are included in numerous initiatives on education and training in France, organised at regional level by various Ministries, covering different educational levels and for a number of target groups. Under the authority of the "Direction des Enseignements Supérieurs" (DESUP), (Ministry of National Education), university distance education, with audiovisual media, is provided at 22 "centres de téléenseignements" of different universities, enabling the regular university curricula to be taught also at a distance.

Short cycle programmes in technology are offered by the technical universities, and DESUP is experimenting with management studies. Universities are also offering multimedia continuing education courses for adults, supported by DESUP. The "Conservatoire National des Arts et Métiers" (CNAM) as a public institution of the Ministry of National Education, provides multimedia vocational and professional education and training in 56 regional centres. In July 1990, Olivier Duhamel presented a report on the desirability of a French Open University. A preparatory Committee will be set up shortly. Among the priorities of the French Ministry are the improvement of the existing system of university distance education, vocational preparation of young people, training of teachers in new technologies, continuing training of engineers, training as a weapon against unemployment, notably for employees in SME's.

9. PERSPECTIVE

As it has been concluded in the IRDAC Opinion(20)

"A large structural effort in distance and flexible learning is required in Europe. Traditional distance learning systems (such as those of the open universities in Europe) should be assisted in redirecting their actions more towards industrial environments. In addition, new technology itself should be used in the production and delivery of training materials to allow for individualised learning and to increase the efficiency of the training process. IRDAC welcomes the actions under way in various European Programmes (in particular developments under COMETT and DELTA) and the emergence of organisations like EuroPACE, SATURN, EUROSTEP, EADTU), but observes that important obstacles still need to be removed, in particular the complete lack of standardization, the high unit cost of multimedia training products, the inadequate teaching and learning experience regarding their effective use and the insufficient user-friendliness and attractiveness of such packages and systems".

On the basis of this present Report and the related analyses of skills and training requirements in the Community, the Commission is currently preparing proposals for action in the field of distance education and training.

(20) IRDAC Opinion on :"Skills Shortages in Europe", paragraph 4.4

ANNEX

FACTS AND FIGURES ON THE OPEN AND DISTANCE TEACHING UNIVERSITIES IN EUROPE

FACTS AND FIGURES ON THE OPEN AND DISTANCE TEACHING UNIVERSITIES IN EUROPE.

Introduction.

The following document provides comparative information on the major institutions for distance higher education in the different European countries.

A standard format has been adopted so as to give a clearly structured picture of institutions and also to enable comparable information to be viewed across institutions.
It is important to bear in mind the diverse nature of the institutions in question.
Categorisation is possible, however, despite significant differences between institutions in, for example, areas such as student entry requirement, curricula, length of courses, methods of course development and methods and media used in teaching. These and many other differences are due in part to the educational, social, political and economic contexts within which institutes operate in each country and in part to the institutions specific goals and polities.

A first category includes five of the 13 institutions described :
The FernUniversitaet in Germany, the Open University in the United Kingdom, the Open Universiteit in the Netherlands, the Universidad Nacional de Educación a Distancia in Spain and Universidade Aberta in Portugal, which are autonomous, degree granting, universities teaching solely at a distance.

A second broad category of members comprises organisations which are Consortia, Joint Ventures or other groupings of institutions or of departments of institutions such as, the Jysk Aabent Universitet (JOU) - Jutland Open University in Denmark, The Fédération Interuniversitaire de l'Enseignment à Distance in France, the Consorzio per l'Universita a Distanza (CUD) in Italy, the Stiching Open Hoger Onderwijs (STOHO) in Belgium, the Swedish Association of Distance Education (SADE) and the Norwegian Association of Distance Education (NADE).
JOU is a Joint Venture between 3 traditional Danish universities. FIED is composed of 23 Centres de téléenseignement universitaire, or distance teaching units established within traditional Universities in France. CUD is a state funded consortium whose members include multi-national commercial organisations as well as educational institutions.
NADE represents a Consortium of institutions offering Higher level Education-at-a-Distance. The Association SADE includes, among other institutions, 14 Universities and University Colleges offering higher level distance education.

A third category includes the two remaining institutions :
The National Distance Education Centre (NDEC) in the Republic of Ireland is designated a faculty of Dublin City University : the Deutsches Institut fuer Fernstudien an der Universitaet Tuebingen (DIFF) in Germany is an organisation with a major responsibility for Research in Distance Education.

Most grateful thanks is extended to the Secretariat of the European Association of Distance Teaching Universities (EADTU) in acknowledgement of their help in contributing the information.

Studiecentrum Open Hoger Onderwijs
Study Centre Open Higher Education - Belgium

General Information

Studiecentrum Open Hoger Onderwijs
Trierstraat 100
1040 Brussels
Belgium
Telephone 32 (2) 230 12 25
Fax 32 (2) 231 17 05

Contact Person
Mr P. Henderikx, Director

Background

The Study Centre Open Higher Education (StOHO) is the Central structure of the Consortium of Flemish universities and other Higher Education institutions in Flanders and Brussels. The Centre and Universities have an agreement with the Dutch Ou, by which all Dutch Courses are available to Flemish students.

Legal Status
1985 - Collaboration with the Open universiteit of the Netherlands. Enrolment in OuNL but using facilities and under supervision of the Flemish Universities.
1986 - ministerial commission develop blue-print for the organisation of higher education distance learning in Flanders.
1987 - StOHO established as an autonomous association sponsored by the Flemish Regional Executive and based on a network of universities and higher education institutions.

Institutional Structure
The Board of the Centre consists of University representatives and those of other higher educational institutions as well as the Government.
Executive Head directs the Central Structure whose tasks include: preparation of governmental policy; curriculum and multi-media learning packages; programming and production of courses; the organisation of regional support services; international co-operation and the promotion of distance education (co-operation with broadcasting companies).

Budget Level and Sources of Income
The Central Structure is government funded - 40 million Francs.

Student Profile

Total number of Students registered:
1/11/90 - 4056

Student Characteristics
21 - 30 years of age - 53%
31 - 40 years - 38%
41 -51 years - 6%
51 - 60 years - 3%
Female - 27%
Male - 73%.
Employed - 76% male & 59% female (14% part-time)
Unemployed - 8% male & 11% female
Previous education - 40% hold a higher degree, 11% hold a university degree and 29% a non university degree (nurse, secretary etc)

Students Distributed over Subject Areas
Technical Sciences - 22%
Management and Organisational Sciences - 21%
Social Sciences - 16%
Cultural Sciences - 9%
Natural Sciences - 8%
Economic Sciences - 7%
Law - 6%
A combination of the above - 12%

Course Offers / Profile of Studies

Undergraduate programme: 130 courses of OuNL available.
Circa 35 diploma-programmes in a modular structure.
A number of courses are adapted to the Belgian context.
Postgraduate programme: EuroPACE courses and Courses of Industrial Applications of Computer from the UKOU.
Preparatory Course: Mathematics for social and economic science.
Continuing Education: see Course Development and Production.
The content and level of existing courses are wide in their scope, from general to highly specialised courses on technological innovation in all technology sectors, with the accent on IT, micro-electronics, telecommunications, CIM, process technology, technology management and training methodology.

Course / Programme Structure
Modular structure (study units) of courses ensure that credit points for the courses can be taken into account for several study paths. Previous studies in programmes taken outside the OU and professional experience can also be taken into account.
A Study Programme on a Diploma Level consists of 5400 hours; short cycle programmes of 800-1500 hours also exist.

Study Load: Courses vary from 50 to 200 Study hours. The average is 100 hours.
Requirements: Open access with a minimum age of 18 years.
Enrolment: Students can enrol at any time during the year.
Assessments: Examinations are completed in Study Centres.
Costs: 100 hours Course - 4000 BEF.
No financial assistance available to students at the moment.

Course Delivery and Student Support

Principal Teaching Medium: Written material (integrated, self learning).
Standard Course Package: dependent on course - printed materials (study texts), videotape/disk.
Costs: Included in course fees.
Complementary Course Material: Videotape, videodisk, home experiment kits, recommended books, CAI.
Interactivity: face to face tuition at Study Centres, Computer CAI.
Student Support: Counselling and Tutoring are completed through Study Centres.
Study Centres: 6 Centres, one in each Province and one in Brussels all based at a University. All learning resources, tutoring and counselling facilities are available. Examinations are completed in the Study Centres.

Course Development and Production

The Courses are mainly provided in the context of the agreement with the Dutch Ou.
The StOHO has responsibilities for the development of courses which are not provided by the OuNL eg. Belgian Law, or need adaption eg. Economics.

Courses are created by Course Teams (academic staff of the university) with a course team president.
The project management is done by the StOHO. Also included (in the preparation phase of the course) are educational and technological assistance to the team. Project managers are educationalists.
Didactic Concepts: High quality didactics based on OuNL and UKOU and on recent developments in Cognitive Psychology.
StOHO has developed and completed courses in the fields of: Law, Economics, Human Resources, Mathematics, Textile Conditioning and Soilless Cultivation.
Nature of Costs: Project Management/Education experts paid by the Central Structure.
Authors: Fee per 4 hour learning unit. Quality control: fee per 4 hour learning unit. Running Costs. Linguistic correction: fee per page. Printing.
Other costs excluding printing: contracted out to academics or other institutions.

Media Methods and Technology

In light of learning objectives, in the effectiveness and efficiency of distance training courses finely tuned to the needs and context of the target groups, accompanied by tutorial support, existing multi-media materials from EuroPACE, the OuNL, SATUP and other providers are:
a used as such, repackaged or custom-made to fit the different target groups.
b complemented with different types of tutorial support to be delivered in local training centres.

New training materials are developed in response to the local context (needs, language and culture).

Satellite usage via EuroPACE - Open Forum.

The Jysk Aabent Universitet The Open University of Jutland - Denmark

General Information

Jysk Aabent Universitet
Neils JuelsGade 84
DK - 8200 Aarhus N
Denmark
Telephone 45 86 136711
Fax 45 86 104680

Contact Person
Kirsten Andersen, Head of Administration, ext.275
Joergen Bang, Chairman of Steering Committee, ext. 147
Telephone 45 86 136711
E-mail AUUUBB@vms 2. uni-C.dk
ID on Earn PCOMMOM@DKAU11

Background

JOU, the Jutland Open University, is a Joint Venture between the universities of Aarhus, Aarlberg and Esbjerg. The JOU is a non-independent institution. It offers extra-mural, part-time courses of study at a distance, based in the fields of study covered by the three institutions. The Open University is financed by the 3 Universities.

Legal Status
1981 - University of Aarhus made a feasibility study in open university teaching offering a course in comparative literature taught at a distance.1982 - Jysk Aabent Universitet established.
1989 - Parliament passed law on Open Learning.

Institutional Structure
Decentralised Academic, Administrative and Student Support at the three host universities.

The JOU Central Organisations:
1 *Governing Organs*
The 3 universities of JOU have separate administrative units for economy and course delivery within their own institutions. Rectors are formally responsible in their own institutions for Open University activities.
JOU is headed by a STEERING Committee elected by the Academic Boards of the 3 Universities.
Chairman of the Steering Committee is the HEAD of JOU.
2 *Academic Structure*
The Study Board of each university deptartment.Teachers of JOU are not employed by JOU but by the Universities of Aarhus, Aalberg or Esbjerg.

3 *Teaching and Research Support*
Departments at the university in charge of the course are responsible for teaching support. JOU has no Research unit but works with researchers and depts. at the 3 universities.
4 *Administrative Structure*
Administration is decentralised: depts. handling courses distribute materials to students.
Central administration takes care of the programme, advertising, seminar planning, international relations.
Local admin. units at the 3 universities take care of student admissions, budgets and fees.

Budget Level and Sources of Income
With the new law on Open Learning the following figures are estimates:
Total budget: 1991 est, 6 mill.DKR.
JOU grant: 1991 est, 4.5 mill.DKR.
Ministry of Education grants per full year student: 10.000 to 22.000 depending on subjects taken.
Estimated income from student fees 1991: 1.5 mill.DKR.

Student Profile

Total Number of Students Registered
1987 - 750.
1990 - app. 700

Student Characteristics
Approx Ave. age - 40 years
Female - 60%
Male - 40%.
Employed - 75%
Unemployed - 20%.
Others (from other institutions) 5%.
Number in Degree Courses - 400.
Number in Independent 1 Year courses - 300.

Student Numbers Distributed over Subject Areas
1990 - Humanities 650
Psychology and Chemistry 50. (prior to 1990 only Humanities offered.)

Course Offers / Profile of Studies

Subject area taught prior to 1990 included courses in the Humanities only. JOU undergraduate programme leads to an exam. art degree. in the Humanities. In 1990 JOU expanded its activities with course offers in Psychology and Chemistry.
1 year credit course offers: Humanities, Law, Psychology and Theology (1989).

Course/Programme Structure
The degree programme is heavily structured with application of traditional university teaching to a Distance

Teaching situation (print material instead of weekly face to face meetings & teachers participate in 4 week-end seminars).

The Academic year runs from January to January.
Courses begin Jan/Feb.
Study Load: 1 year part-timecourse is equivalent to Half year full time study.
Requirements: Open access to all students over 25 years and not registered at another institution of higher education.
Registration: Courses for the following year are presented in a Prospectus published in late August. Applications invited Aug to Oct/Nov. A maximum of 30 students are selected per course.
Assessment: Examination - Oral 30 minutes to an hour Written - 3-6 hours. Also term papers (15-20 pages).
Credit Point: Credit transfer is available wherever bi or multi-lateral agreements have been made in Scandinavia.
Fees: 1991 1.900 DKR.

Course Delivery and Student Support

Principal Teaching Medium: Written material.
Standard Course Package: primary and secondary literature, textbooks, xeroxed material(articles from academic journals self assessment tests and assignments). These materials are distributed at Seminars.
Cost: 3000 D.kr. (for seminar and course material)
Complementary Course Material: Computer conferencing
Interactivity: A characteristic of JOU is that distance learning/teaching process should at the same time be a social process. Students are in contact with teachers by mail and /or telephone. The 4 weekend Seminars are an intregral part of each course. Correspondence.
Student Support: Counselling and tutoring by teachers attached to the course. Students encouraged to form peer or Self Help groups (established at initial seminar). Study Centres at each University are equiped with telephone, television, VCR and Computers.

Course Development and Production

The Study Board from the Dept. or Faculty to which the Course belongs at one of the Universities has full responsibility for Development. Course material is the sole responsibility of the teachers when answering to the Board.
Use of Staff: Staff/teachers from the 3 Universities as well as experts from other Universities.
Costs: To date, no figures are available as the economy of JOU has been integrated within the budgets of the 3 Universities.

Media Methods and Technology

JOU has collaborated with the Danish Broadcasting Company and the University of Copenhagen producing 3 courses with Radio and TV as integral componentry.

Since 1987 JOU has been running a feasibility study on computer conferencing with IBM Denmark. As part of the Study contract and in collaboration with Aarhus Technical College an Educational Conferencing System (RelaCS) has been developed.

The Interuniversity Federation of Distance Teaching (FIED) - France

General Information

The FIED
Université de Paris I
12, Place du Panthéon
F - 75231 Paris CEDEX 05
France

Contact Person
Mme Ch. Guillard
Présidente de la FIED
TELEDIX - Bureau E 217
200, Avenue de la République
Telephone 33 (1) 47216395 or 40977551
Fax 33 (1) 47291821
Telex UPXNANT 630898 F

Background

The FIED (the Fédération Interuniversitaire de l'Enseignement à Distance) is a federation of 23 traditional universities with Distance Teaching departments or centres. Developed from 1963 to 1980, the Centres are an integral part of the regular university structure offering 'decentralised Teaching'. Lecturers preparing written material also give face-to-face lectures.

Legal Status
1947, Radio Sorbonne; 1963, Paris, Lille, Nancy, Strasbourg Universities establish 'Distance Teaching' Departments; 1978, Aix Marseilles; 1986 Grenoble. (a list of the 22 Universities follow as an annex).
FIED was created in September 1987

Institutional Structure
Centralised academic, administrative and student support structure based at individual universities offering 'télé-enseignement' and decentralised teaching.
Ministry Control:
MEPENTE (Mission des Equipements Pédagogiques et des Nouvelles Technologies.) within the French Ministry has responsibility for:
- to support the action of FIED in international co-operation concerning education material exchange and mobility of students
- approve Distance Teaching Centres educational programmes, propose new courses and create new Centres where necessary
- allocate funds
- finance production and broadcasting of Radio and Television programmes – seek agreement between the Ministry of Education and Radio France and French Regional Radio
- finalise broadcast schedules and submit them to Radio Stations
- initiate Research in areas of Distance Teaching - collate statistics re university 'télé-enseignement'

University Level: A 'Distance Education Centre' Director is nominated by the President of each University where a Centre is attached; The Director is assisted by a committee of teachers – and administrative staff; Submits requests to the central organisation and co-ordinates Research, use of media and organisation of courses.
Organisational differences can be considerable, particularly between smaller and more major Distance Teaching Centres.

Student Profile

Total number of Students Registered
1987 - 26000
1990 - 31200

Student Characteristics
Ave age 30 years.
Students' ages range between 18 and 74 years.
Number Employed - 72%
Female Students - 80%.
Male Students 20% (Univ de Paris X – Nanterre)

Course Offers / Profile of Studies

Subject areas taught include: Teaching Art; Social Sciences (classic and modern literature, philosophy, psychology, sociology, educational sciences, history, geography, languages, applied languages); Law. Natural Sciences, Mathematics, Physics, Chemistry. Continuing Education: Preparation for the Librarian Examination (Paris X)

Programme/Course Structure
Degree programmes are offered dependent on individual university policy.
Study: DEUG(Diplome d'études universitaire générales) takes 2 years
Degree (licence) an additional 1 year.
Maîtrisé an additional 1 year, ie. 4 years.
Requirements: Entry qualifications are the same as all French Universities ie. 'baccalauréat' or equivalent.
Enrolment: as for regular universities
Assessment: as for regular universities.
Fees vary according to university - University fees; 500F.
Correspondence tuition fees; 200-400 F.
Course Package (ie cassettes) is extra.

Course Delivery and Student Support

Principal teaching medium is written material enabling students to study at their own pace.
A Standard Course Package - dependent on individual University.
Printed material accompanied by self assessment and revision exercises, audio tapes. Materials are edited by the FIED and the Editions de l'Espace Européen.
Practical work for Science Courses; home kits for Physics and Chemistry. Experiment demonstration-video.
Supervised group work (face to face).
Costs: Variable. Each university has its own fee structure.
Complementary Course Material: Radio, TV Broadcast, Video
Interactivity: Correspondence, computer.
Student Support: Tutoring is by telephone or face to face where necessary. Counselling - a student is always able to telephone teachers at the Centre.
In some Centres students are able to gain maximum benefit from the tutorial system since they have access to E-Mail facilities and computer/databases. Some Centres lend books by mail.

Course Development and Production

Dependent on University. Syllabuses are identical in all universities and materials are collated and written by teachers of students at a distance. Radio and TV programmes are produced at the Centres which have studios of a professional quality.

Media Methods and Technology

'Telé-enseignement' was once just radio now it has become multimedia. Radio linked to the years curriculum may include material of interest to a wider audience.
Broadcast on regional rather then nation stations.
Television broadcast locally.
Although no accurate statistics are yet available there are over 2000 different courses taught within FIED.
Approximately 80% of course material consists of printed matter.
Radio Broadcasts: 1368 half hour programmes have been produced by 14 Centres.
Negotiations currently underway for university access to Radio and TV.
Audio-Cassettes: 203,000 per year are produced by 17 Centres.
Video-Cassettes: 200 produced by 2 Centres.

FIED Centres
Aix-Marseille I. Univ de Provence - Centre de TEU
Sciences and Lettres
Univ. de Franche-Comte Besancon
Univ. de Bordeaux III
Univ. de Caen
Univ. de Bourgogne
Univ. De Sciences Sociales de Grenoble
Université de Grenoble I
Univ. de Lille III
Univ. de Montpellier III
Univ. de Nancy II
Univ. de Nantes
Univ. de Paris I CAV
Univ. de Paris I - Radio Sorbonne
Univ. de Paris III - Sorbonne Nouvelle
Univ. Paris VI - Jussieu
Univ. de Paris X - Nanterre
Univ. de Reims
Univ. de Rennes II
Univ. de Rouen
Univ. de Strasbourg II
Univ. de Toulouse II - Le Mirail
CNAM - Conservatoire National des Arts et Métiers.

A ministerial plan for an Open University which would regroup the projects undertaken by FIED by means of different continuing education and audio-visual centres is under consideration. A Central structure with regional resource centres is envisaged but no projects have yet been made concrete.

FernUniversität Gesamthochschule - Germany

General Information

FernUniversität - Gesamthochschule
Postfach 940
D - W 5800 Hagen 1
Germany
Telephone 49 (02331) 8041
Telex 823137 feuni d
Teletext +62804 ##
Fax 49 (02331) 804313

Contact Person
The Rector, Univ.- Prof. Dr. jur. U.Battis.

Background

FeU is a Distance Teaching University and part of the regular Federal and State Government of Nordrhein - Westfalen educational structure.

Legal Status
Established 1st December 1974 by Act of Parliament of the State of Nordrhein - Westfalen; formally constituted on the 4th October 1975. Organisational Structure and autonomy defined by the General Higher Education Act (Hochschulrahmengesetz, HRG) 1976 ammended 1985.

Institutional Structure
Centralised academic, administrative and student support. Decentralised student support at 59 Study Centres.

FernU Central Organisations:
1 *Governing Organs*
Convent, Senate, Rectorate, Rector. Standing Committees of the Senate; Academic Studies, Research, Planning and Finance, Continuing Education.
2 *Academic Structure*
Faculty, Sections/Departments, Subjects.
3 Teaching and Research Support Structures
a Centre for Distance Education Development - ZFE
b Central Institute for DE Research - ZIFF
c University Library, Computer Centre.
d Affiliated Institutes: Institute for Applied Business Studies - IFAB, Institute for New Technologies in Electrical Engineering - INTE, Institute for Solar Energy Techniques - SOLATEC.
4 *Administrative Structure*
Budget, Student and Academic Affairs, Staff, Production.

Budget Level and Sources of Income
Full Academic autonomy with 100% State funding.
1990 - DM 80 million (including 10% income from sales of material).

Student Profile

Total number of students registered
1988 - 34000 students.
1990 - 45000 students enrolled.

Student Characteristics
Median age (25 -31 years of age) - 28 years
Female - 29%
Males - 71%
Number in Degree Programmes - 66%
Guest enrolments - 24%

Student Numbers Distributed over Subject Areas/ Faculties
Mathematics / Computing - 24%
Education, Social Sciences and the Arts - 16%
Economics - 47%
Electrical Engineering - 9%
Law - 3%

There are 4 Types of students:
Full time - 12%
Part time - 54%
Students from Regular Universities - 9%
Guest Students -24%

35% of students have a degree.
80% of FernU students are employed.

Course Offers / Profile of Studies

Over 1000 Courses are offered in the following Faculties: Electrical Engineering; Education, Social Sciences and The Arts; Mathematics and Information Science; Law; Economics.
Faculties are divided into 'Subjects' .Each subject is the responsibility of 1 Professor with 3-6 staff. There are 80 Subjects.

Course/Programme Structure
All courses developed for the degree programme are multi - purpose and used for Continuing Education programmes.
Study programmes are provided for Diplomas, MA. and Postgraduate Studies (available in all disciplines).
Courses are spread over Winter and Summer Semesters. A first degree Diploma Course entails a minimum enrolment of 7 Semesters(12 Semesters part time) - second degree MA Course is 8 Semesters(16 for part time students ie. 8 years).

FernU offers the same opportunities for postgraduate studies (PhD etc) as other universities in Germany.
Study Load: Degree Programme, Full time - 40 hours per week, Part time - 20/30 hours per week; Students from traditional universities can attend courses at FernUniversität; Guest students complete single courses or continuing education programmes.
Requirements: Entry requirements are comparable to other German Universities ie.
'Hochschulzugangsberechtigung' - Secondary School Leaving Certificate as an entry prerequisite.
Enrolment by Semester. Full and part time students and other university students who do a complete programme enrol in the Winter Semester, other courses enrol in Summer Semester. Final dates of entry - 15th July and 15th January.
Assessment: Written assignments. Intermediate and final examinations.
Fees: *No Tuition* Fees. Fees for reception of course material - Full time students DM 600 (50% for part time), Guest Students doing single courses DM 150.

Course Delivery and Student Support

Principal Teaching Medium: Essentially printed material (specially designed, self learning).
Standard Course Package: Study texts with formulated study goals and referenced methods of study, glossaries, study guide, self assessment exercises and assignments. Materials (partly) sent at fortnightly intervals.
Cost: See 'Fees' above.
Complementary Material: TV Video, computer (software-floppy disk), multi media electronic communications, Audio cassette, videotext access to computer centre.
Interactivity: Correspondence, partly compulsory tutorial attendance (face to face communications forms an integral part of programmes) at seminars, workshops, laboratories, colloquia and study days. Activities normally take place at Study Centres.
Student Support: Counselling on general issues is Centralised.Meetings take place in Study Centres; Subject specific guidance is done by course managers in the Faculties; Student Union.
Study Centres (59) give access to media not able to be sent to students, organise laboratories, workshops.
Initial entry counselling meetings take place in the Study Centres, mentors offer tutorials, study groups are composed.

Course Development and Production

Characteristics: Development responsibilities lie strictly with the subject professor and faculty.
Technical consultation is available to Professors from the 'Centre for Distance Education Development'.
Materials are produced and printed in-house.

Media Methods and Technology

Media Products and Courseware include printed material covering all educational studies – supplementary audio cassettes for 50 courses – video cassettes for 120 courses – there are 50 courses in disciplines of German Language & Literature and Psychology for visually handicapped, in Braille, audio cassette or in Computer disk.

Media Technology systems in use: FernU TV Broadcasts (terrestrial, via ARD) - 20 courses; computer-mediated communications in the field of Database processing and concerning the submission, assessment, and evaluation of computer marked assignments; applications of interactive videotext for ordering library books, videos and general communication between student, teaching and administrative staff of FernU.

Media and Technology related Projects: EUROSTEP; CHANNEL e; EADTU; JANUS; EPOS; ASAP; PETE; Satellite - Mediated Distance Learning in Hungary and Poland; SATURN, Expornett.

European Study Centre at Budapest.

FernU collaborate in the following programmes: EC. - COMETT; DELTA; TEMPUS

Deutsches Institut für Fernstudien
The German Institute for Distance Education - Germany

General Information

Deutsches Institut für Fernstudien an der Universität Tübingen
Wöhrdstr. 8
D - 7400 Tübingen
Germany
Telephone 49 (07071) 3041
Fax 49 (07071) 37484
E-mail ewma001@convex.2dv.uni-tuebingen.de

Contact Person
Prof. Dr. Rüdiger vom Bruch, Director
Dr. Hans-Peter Baumeister, International Affairs

Background

The DIFF – Deutsches Institut für Fernstudien an der Universität Tübingen – is a research and development institute in the field of advanced further education for adult target groups and holds a special position within the German and European context of distance education institutions.

Legal Status
The DIFF received its charter as a private foundation on 28th February 1967. It was established by the Volkswagen Foundation in co-operation with the Ministry of Education of Baden-Württemburg and the University of Tübingen. From 1972 funding was provided by the eleven states of the Federal Republic of Germany, and in 1977 the Institute was accepted as a Research Institution financed on the basis of a special administrative agreement between the Federal Government and the State (Länder) Governments.

Until 1984 its main task was to do research, develop and evaluate distance teaching materials, eg. In-Service Training (INSET) of Teachers. These materials were distributed to and used by other institutions i.e. teacher education institutions.
An evaluative report, in 1984, of the 'Wissenschaftsrat' (Council for Science) led to the confirmation of change in policy that was reinforced by a new report in 1990 defining DIFF's future role as more clearly in a research capacity. One special task is to co-operate in research programmes at a European level. The principal task to complete research into all forms of higher level continuing and professional education including distance self-study offers.

Institutional Structure
The DIFF Central Organisation:
1 *Governing Organs*
Administrative Council, Board of Academic Trustees, Director
2 *Academic Structure*
Academic Council, Departments, Academic Committee of the Institute
Departments include:
- Learning Research
- Media Research
- Further Education using Telecommunications
- Natural Sciences
- Mathematics/Computer Science
- History, Social Sciences, Economics
- Education Science/Further Education

3 *Adminstrative Structure*
Administration, Finance.

Budget Level and Sources of Income
The Institute is allocated an annual budget of DM 10 Million. Additional Fee Income and other funds from research programmes, circa DM 3 - 4 Million.

Course Offers

The DIFF offers more than 600 Study Units, as well as complementing audio-visual material and Software. The study units are endorsed by different institutions, eg. private enterprise - SMEs, administration and the Fernuniversität, Hagen.

Departments with Current Projects

Learning Research

Knowledge acquisition from texts using flexible computer-assisted data banks – and from texts and pictures
Promoting learning strategies in Guided Independent Study
Knowledge diagnosis in an interactive computer-assisted learning environment
Formative and summative evaluation of the teaching-learning model applied in the Radio College Courses
CIM and computer-assisted Interactive Media

Media Research

Design Principles for Interactive programmes
Acquisition of complex content structure
Development of a system for generating models

Further Education using Telecommunications

TV-Academy
Radio College Courses – Communications
Application of instructional theories in the design of self-study materials
Information technology – a basic course (pilot study)

Mathematics/Computer Science

Girls and computers
Computer applications in machine tools and manufacturing engineering
Technical statistics for engineers

Natural Sciences

Tumour immunology
Man's intervention in the biosphere
Order and chaos in physics
Models for interdisciplinary work for schools

History, Social Sciences, Economics

Firther education for migrants from Eastern Europe
History of technology
Further education for women
International marketing
Teaching Cultural Studies in the German language classroom
European culture-integration and diversity

Education Science/Further Education

Design of instructional materials for self-study
Teaching and learning key skills in the workplace

Course Development and Production

Terms of Reference

The main areas of work are:
Analysis and optimization of teaching-learning processes in Guided Independent Study.
Planning and development of practice and problem-oriented further education offers.
Investigation and use of the teaching-learning potential of new technologies for further education.
Development of Independent Study offers in new subjects and for new target groups.
Co-operation with other institutions on research, development and implementation of Guided Independent Study offers.

Focussing on prototypes for further education offers (under conditions of Guided Independent Study), the Institute engages in many forms of co-operation with potential users in universities, polytechnics and industry.

In this way DIFF furthers its role to investigate fundemental questions in the acquisition and processing of (new) knowledge by using (innovative) communication and information technologies and will develop new concepts of advanced vocational further education and media-supported independent study materials.

National Distance Education Centre - Ireland

General Information

National Distance Education Centre
Dublin City University
Dublin City 9
Ireland
Telephone 353 (1) 370077
Fax 353 (1) 3608

Contact Person
Mr C.Curran
Kay Mac Keough
Telephone 353 (1) 370077 extension 330
Fax 353 (1) 370077 ask for ext. 494
E-Mail 75008629 @ vaxl.dcu.ia

Background

NDEC is the national centre for distance education in Ireland operating on a co-operative and collaborative basis with the universities and other institutions of higher education. NDEC is formally designated a faculty of Dublin City University.

Legal Status
Established 1982. First Courses presented 1983 under National Institute for Higher Education (now Dublin City University). In September 1985, the National Distance Education Council was launched by the Minister of Education its role to support the development of a national distaneducation programme.

Institutional Structure
Centralised Academic, Administrative and Student Support functions. Decentralised Student Support at more than 40 Study Centres.

The NDEC Central Organisation:
1 *Governing Organs*
National Distance Education Council (Members: other universities, 3rd level education, industry, trade unions, research institutions & govt bodies.), National Distance Education Centre (the executive arm of the Council).
2 *Academic Structure*
Academic Council, Course Team, Subject Leaders, Course Co-ordinators.
3 *Teaching and Research Support Structure*
NDEC has full access to Dublin City University facilities - Library, Computer and software support services.
NDEC have carried out Research Projects on: Evaluation of Courses; Distance Education Systems; Economics and Cost Effectiveness of Distance Education.

4 *Administrative Structure*
Finance, Computer Services, Examinations and Admissions provided by Dublin City University in close liaison with NDEC staff.

Budget Level and Sources of Income
Grant from the Higher Education Authority - £ 350 000 p.a.
Additional Income - Student Fees (contributes 65% of income).
While NDEC has a separate Budget its financial affairs are administered through Dublin City University.

Student Profile

Total Number of Students Registered
1987 - 290
1990 - 3500 student modules.

Student Characteristics
Average age between 25 and 35 years.
12% of applications came from those under 23 years (1988).
20% Female
80% Male.
Number in employment - 98%
Unemployed - 1%
Others - 1%.
Number in Degree Courses - 1342
Number in Continuing Education Courses - 740

Student Numbers Distributed over Subject Areas
Degree/Diploma in Information Technology Credit modules - 892
Introductory module - 450
Postgraduate Diploma in IT for Accountants - 50
Microcomputers and Accounting (M&A) - 600
Business Applications for Microcomputers (BAM) - 50
Science and Technology updating Courses (STC) - 20
EuroPACE Courses - 20

Course Offers / Profile of Studies

Degree Course offered. Information Technology (IT) comprising courses in: Management Science; Human Science; Communication Technology; Computing.
Postgraduate: IT, Computing.
Continuing Education: Computing and Management, M&A, BAM, STC, Advanced Continuing Education.

Course/Programme Structure
All courses are of modular structure . There are 4 levels to the Degree Course and students must take 4 modules at the first three levels. Depending on qualifications already received exemptions may be granted at level 1, 2 or 3 stages. Each module is of 200 hours duration. 2 - 4

modules taken per year.
Postgraduate: 10 modules of 50 hours.
Continuing Education: Single module courses. Variable completion times.
Courses are designed to enable completion of a degree in 6 years.
Study Load: Each module requires a minimum study of 6 hours per week over a 32 week term. Continuing Education courses: 20-30 weeks with enrolments 3 times per year.
Requirements: Degree Courses are *open* to all students over 23 years of age. Those students under 23 years must have matriculated in the Secondary School Leaving Certificate including Mathematics and language with C grade at Honours level in 2 of the 6 subjects.
Continuing Education Courses have *open* admission.
Enrolment: Introductory Course - Oct. Credit Courses - Feb.
Assessment: 4 tutor assessed assignments must be completed quarterly contributing to 50% of the total Module assessment. Students must obtain an average mark of 40% in assignments to be allowed to sit an examina approved by the Academic Council of Dublin City University or other accrediting institutions.
Fees: Degree (BSc) - £ 225 per module; PGDip - £ 1500 per complete Course; M&A - £ 375; BAM - £ 400; Continuing Education Courses - £ 300 +.
Students pay own fees but may be reimbursed by their employers. The Department of Education operate a small scheme allocating 12 scholarships for married women tenable at courses at any State Higher Education Institution.
Limited remission of fees scheme.

Course Delivery and Student Support

Principal Teaching Mediums include printed text material and video. This is supported by regular tutorials in Study Centres.
Standard Course Package: Self instruction texts, self assessment questions, assignments, software (where relevant)
Costs: As per fees above.
Complementary Course Material: Videos, audio tapes, required texts. TV & Radio(where relevant), CAI.
Interactivity: Correspondence, Telephone and face to face Tutoring, Counsellors, attendance at a Study Centre.
Student Support: Tutor for each module (ratio 15-1); Central counselling by tutor/student services co-ordinator and senior counsellor.
There are over 40 Study Centres which are located in other Educational Institutions and locations throughout Ireland. BSc. students register at Dublin City University. If students are registered outside Dublin they are also registered as students of the Study Centre (host) Institution.

Course Development and Production

Characterised by collaboration and co-operation with other universities, technological institutions, other statutory bodies and industry. *Course teams* agree a Course syllabus. Subject leaders oversee academic development with specialist writers, editors, and co-ordinators.
Course proposals are evaluated by the Dublin City University Academic Council, NDEC, the National Council for Education and oth appropriate accrediting bodies.
Academic and quality control is the responsibility of the Course Team. Senior Academics act as subject leaders and develop detailed briefs for course writers in consultation with the Course Team. The quality of Courses and examinations are subject to peer assessment by external examiners.
Production of Courseware: When texts have been editedthey are typeset in the NDEC and camera ready copy sent to an external printer. The text are sent to students by post.. Video,audio tapes and software are produced by NDEC.

Media Methods and Technology

Text is typeset on Apple MacIntosh Desk Top Puplishing.
20 Video tapes have been produced by the Centre in co-operation with external consultants. Six programmes have been Broadcast on CHANNEL e and by EUROSTEP. The Centre has its own video production equipment and editing suite.
Television is not used on a regular basis however individual courses or packages have been broadcast by NDEC in co-operation with RTE (Irish National Broadcasting Body).
NDEC is involved in projects investigating the feasibility of various media: Transnational IT Skills Cours utilising Hypermedia, Peripheral Regional Infrastructure for Satellite delivered Modules. NDEC is a contractor with EC programme COMETT.

Consorzio per l'Università a Distanza - Italy

General Information

Consorzio per l'Università a Distanza
Via G. Marconi 32
87030 Rende (CS) - Italy
Telephone 39 (984) 8351
Fax 39 (984) 835292
Rome Office.
Corso Vittorio Emanuele 229
00186 Roma
Telephone 39 (6) 686 7429/686 7430
Fax 39 (6) 683 3873

Contact Person
Dott. F. Lata, Direttore-Generale
Telephone 39 (984) 838 566/837 541
Dr. N. Lamedica
Telephone 39 (6) 686 7429
Fax (Personal) 39 (984) 837 716

Background

The CUD is a Consortium of Italian Multinational Companies, Universities, and semi-governmental organisations. CUD is operated as a company. Its purpose is to provide a Distance University System for Italy. Members of the Consortium include: Università della Calabria; Consorzio per la Ricerca e la Applicazioni in Informatica (CRAI); Università 'La Sapienza' di Roma; Università di Trento; Camera di Commercio Industria e Agricoltura di Latina; Olivetti; Università di Bologna; Comune di Cosenza; Formez; RAI; IBM; Università di Siena; Confindustria; Politecnico di Milano; SIP; Università di Bari.

Legal Status
Support from the Italian Ministry of Education in January 1984 for a project sponsored by the University of Calabria and organised by the CRAI was followed by the founding of the CUD in March of the same year. Legal status established by Presidential Decree, November 19. 1986, and the first official enrolment of students. Formally constituted by law (341/90 art. 11/Comma3) in 1990.

Institutional Structure
Centralised academic and administrative function with decentralised student support at Study Centres. 'Learning materials and student support services are designed by the CUD. on behalf of those Universities which are members of the Consortium. Students enrol at the universities, their study programmes are supervised by tutors appointed by CUD. and examinations are completed at the student's university'.

The CUD Central Organisations:
1 *Governing Organs*
Administrative Council - President of the Consortium, Direttore Generale.
2 *Academic Structure*
Rectors Committee - all rectors of member universities.
International Technical and Scientific Committee.
Independent Universities who are members of the Consortium maintain their own Structures and develop distance teaching programmes with CUD.
3 *Teaching and Research Support Structure*
a Comitato Tecnico-Scientifico.
b Centre of Research in Educational Technologies and a Laboratory in Educational Technology will be established in 1991 with financial backing from the Ministry of Southern Affairs.
4 *Administrative Structure*
'Collegio dei Sindaci' - responsible for financial control. See number 2 above. Individual Administrative Structures.

Budget Level and Sources of Income
Relationship with government is close – university education is regulated by the Ministry. Consortium Membership Fees 1990. 150,000,000 lire pa. Pro-rata payments to Universities per student enrolled - 1,500,000 lre. Pro-rata payments to local authorities for the running of Study Centres - 1,000,000 per student enrolled p.a.
Government contribution: starting 1991/92 - 25,000,000,000 lire.
Developing didactic materials - 20,000,000,000 lire for the next three years 1991-93.

Student Profile

Total Number of Students Registered
1988 - 1200
1990 - 2300

Student Characteristics
Aged between 18 - 40 years
Female - 33%
Male - 67%.
Number of students in full time employment - 60%

Student Numbers Distributed over Subject Areas
Economics - 100
Informatica - 2200

Course Offers and Profile of Studies

Curriculum approved by the National University Council. Degree structure: the 'Laurea', 4-6 yrs for completion &title, 'dottore'. The 'Diploma' (equivalent to the Bachelors) is a 3 year university qualification.
Graduate Programmes: Laurea of Economic (experimen-

tal stage). Diploma in Informatics (Computer Sciences). Diploma in 'Lingue' (Modern Languages) to start Nov.1991.There are no Postgraduate or Continuing Education Courses though CUD has developed materials for continuing education of teachers in primary and secondary schools.

Programme / Course Structure

Courses - modular in structure. Laurea of Economics composed of 15 credit units and the Diploma in Informatica 12 credit units which students-at-a-distance complete in 3 years, ie. 4 units per year or 2 per semester.

Study Load: Est. 20 hours per week one third to be spent at a study centre.Annual study load - "Laurea of Economics" demands 1200 hrs study p.a.

Requirements: High School graduation is required for entry. Access is open to those over 18 years of age.

Enrolment: Students enrol under conditions operating at the host University which is a Consortium Member. A strict quota system operates.

Assessment: Examinations are at fixed stages - provide a rigorous pacing mechanism. Students are tested at the end of each unit. All examinations are written and oral. and exams. normally held twice a year for students-at-a-distance.

Credit Point: The degree is accredited by the University of enrolment within a national system of university qualifications.Credit transfer to another Italian University is automatic.

Fees: No cost to student – see Budget Level & Sources of Income.

Course Delivery and Student Support

Principal teaching medium is composed of specially designed self instructive print material. Each course has 15 units consisting of circa 40 pages. A full course is contained in 5 Books of 150 pages each.

Standard Course Package: Printed didactic materials, Study Guide, Floppy Disk and audio visual material.

Complementary Course Materials: CAI, Audio and video cassettes.

Interactivity: Correspondence, telephone-network tutorials, Study Centres(SCs).

Student Support: Tutoring and counselling is maintained by CUD appointed senior tutors whose responsibility involves overseeing student programmes and the role of tutors in designated subject areas. Services are hosted within the Study Centres. The university professors also assist in certain courses.

Study Centres - high focus and an integral part of the system. Students receive their materials at the SCs.- make obligatory bookings of 2 hours(min) per week computer access, attend additional lectures and meet tutors and advisers. Centres are equipped with Olivetti M24 computers and other support material.Specially selected tutors provide tutoring and counselling services. Centres are located throughout Italy. Currently there are 15 but by 1992, 25 will be in existence.

Course Development and Production

Courses are created by designated university professors and assistants. Authors, experts in their field, write materials. CUD advises on pedagogical structuring of learning materials and offers the services and expertise of instructional designers and production staff. Drafts are analysed by the CUD and commented on, in terms of distance learning didactics, before the final version is edited.

Production is completed by the CUD processing the final version with enhancement by the addition of appropriate distance education didactics (implementation of CAI - Audiovisual etc.).

Printing is done by outside agencies. Audio visual material is produced in co-operation with RAI.

Academic control is the prerogative of the universities offering the CUD courses. Quality control of content lies with that university faculty. Quality control of the materials lies with the Directtore-Generale of CUD.

Planning is carefully controlled by the Administrative Council aided by the International Technical and Scientific Advisory Committee.

Media Methods and Technology

Use of multi-media technology differs according to the use of integrated didactic materials. Currently 60% of materials are in print form – 20% software, audiovisual and broadcast material. Current media mix is composed of printed materials, audio-video cassettes (VHS), CAI (MS DOS). Personal computers in Study Centres are joined in local area network (mini-computer as network server). Communication between CUD and Local Study Centres is via e mail & Fax. By 1992 Centres will be connected in geographic area network.

Current Projects: Satellite broadcasting (eg. via RAISAT) and high speed network to have data as integration media and to develop courseware interactivity. An aim of CUD is to integrate various media in HYPERTEXT and vehiculate it on CDI when technology and hardware are well diffused in Italy (1992/3).

Level of Investment: Delivery and building courseware technologies 1991-93 circa 3,000,000,000 lire p.a. increasing from 6% to 11% of total budget.

The Open Universiteit of the Netherlands

General Information

Open universiteit
Valkenburgerweg 167
6419 AT Heerlen
P.O. Box 2960
6401 DL Heerlen
Telephone 31 45 762222
Telex 56559
Fax 31 45 711486

Contact Person
Drs C.W.van Seventer
Member of the Executive Committee
International Relations
Telephone +31 45 762223

Background

The OuNL is an independent institution and part of the system of higher education in the Netherlands (13 Universities and 80 institutes for higher vocational training). Its special goal is to stimulate innovation in this system. The OuNL is provided for by Act of Parliament.

Legal Status
Establishment of Planning Committee, 1977; Parliamentary approval,1981; Operational, 1982; Officially constituted (by Charter-Law on the Open University) and first students, 1984.

Institutional Structure
Centralised Academic, Administrative and Student Support in Heerlen. Decentralised Student Support at (18) Study Centres.

The OuNL Central Organisations:
1 *Governing Organs*
Council of the Open university, Executive Committee (Board of Governors), Participation Council (advisory to Exec. Com.), Council of Professors (Senate).
2 *Academic Structure*
Production Groups (faculties), Departments.
3 *Teaching and Research Support Structure*
Centre for Educational Production; Dept. for Publishing and Technical Production; Dept. for Enrolments and Examinations; Dept for Student and Market Relations; Dept for Research and Evaluation; Centre for Educational, Technological Innovations.
4 *Administrative Structure*
General and Legal Affairs, Personnel Affairs, Financial Affairs, Logistic Services.

Budget Level and Source of Income
1990 - DFL 94.1 million
Governmental Grant - DFL 71.2 million
University Income - DFL 17 million
Other Income - DFL 5.9 million

Student Profile

Total Number of Students Newly Enrolled
1990 - 22000

Number registered at years end
1988 - 32815 (Dec)
1990 - 53500

Student Characteristics
Median Age - 31 years
Female 37% Male 63%
Employed - 74% Unemployed - 10% Others - 16%
Study Plan (Options) for Students:
Undecided - 20%
Continuing Education - 10%
Short Programmes - 35%
Academic Courses - 35%

Students Distributed over Subject Areas
Business and Administration (B&A) - 28%
Cultural Science (Cult Sc) - 11%
Economics (Ec) - 12%
Physical Science (Ph Sc) - 4%
Law - 18%
Social Science (Soc Sc) - 13%
Technical Science (Tech Sc) - 14%

Course Offers / Profile of Studies

Courses developed by 7 corresponding 'Production Groups' (faculties) are offered in the following 7 fields of study:
19 courses in B&A + 4 split courses
16 courses Cult Sc
18 courses Ec
23 courses Ph Sc
24 courses Law + 5 Flemish versions
24 courses Soc Sc
17 courses Tech Sc

Programme / Course Structure
The OuNL is characterised by *open* access (no entry qualifications needed); *open* programming (Students design their own as far as they do not wish a regular degree programme); freedom of place, time, and pace (student free to progress according to wishes and circumstances). Study at the Ou can consist of:
- courses with or without examination leading to a certificate
- a combination of courses according to personal need

– a combination of courses totalling 800-2000 study hours leading to a short cycle diploma (27 programmes)
– a combination of courses totalling 4800-5400 study hours, including practical work leading to Diploma of Higher Vocational Education (8 programmes).
– a combination of courses totalling 5400 hours including thesis or research project leading to Degree Status. There are 16 possible differentiations and one Ou Degree.

Study Load: Courses vary 50;100;200;250;300 study hours.The average course is 100 hours. (see above)
Requirements: Registration is open to students over 18 yrs of age with knowledge and skills at a 'Secondary Education' level.
Enrolment is open, has a duration of 2 years and can be cancelled within 2 weeks with 50% refund of fees.
Assessment: self assessment;some courses include compulsory practical work at the local Study Centre and all courses are examined.There are examinations 3 times a year for which the student can choose.In selected courses, SYS.1, a flexible computer examination system, allows the student to take examinations whenever they wish.
Credit point: 100 hours study equals 3 credit points, ie. Degree status acheived with 162 credit points (3 x 54.). This differentiates according to Diplomas – thesis/ practical work: 300-600 study hours.
Fees for a course are dependent on study load. Currently 100 study hours course costs DFL 220.
Grants available to students 21+ who can prove financial hardship – about 9% in1989.

Course Delivery and Student Support

Principal teaching medium is Printed Course material but increasingly interactive simulation – computer assisted learning.
Standard Course Package: Printed Materials - graphs, photographs, drawings, 1 or more books of 200 pages+ (400-500 pages per 100 study hours) as integrated text and workbook or separate textbooks, workbooks or study guides. Self assessment tests and model examination. Also included: audiovisual materials, computer programmes, practical work at a Study Centre. Material is interactive and self learning where possible.
Costs: Included in Course Fees.
Complementary Course Material: Audio-visual/interactive computer based programmes in Study Centres.
Interactivity: Computer assisted learning, telephone tutoring, attendance at a Study Centre and interactive electronic media based on computer technology.
Student Support: Central provision by the Department of Student Support and Market Relations (especially for specific target groups,ie. handicapped students), and by counsellors at 18 Study Centres.
Tutoring: General and initial tutoring is given by general tutors at the Study Centres. Course related tutoring is monitored by staff tutors from the production groups (faculties).
Study Centres: Currently 18 in the Netherlands and 6 in Flemish part of Belgium. Responsibilities include: Use of audio-visual and computer programmes, tutoring and counselling, compulsory practicals or tutorials organised 3 times a year. Tutors are employed, on a part-time basis, from other institutions of higher education, industry and the OuNL.

Course Development and Production

Proposals within the framework of a strategic 4 year plan are prepared by Programme Committees of the Production Groups with input from external organisations/ traditional university/industry. Approval is given by the Executive Committee on advice from the Council of Professors (including Budget to elaborate a Course Plan).
Development of a Course is the responsibility of the Production Group (PG).Each course is developed by a Course Team (Chairman, a staff member of PG, internal and or external writers and one or more Educational Technologists designated by the Centre for Educational Production).
The decision to produce the Course is made after developmental testing by a small group of students and after approval on the place in a programme, the disciplinary and didactic quality.
Production is the responsibility of the Department of Production and Publishing. The process of development and production is largely computerised. Printing is completed by outside printers/publishers. Within 5 years after the first production the course is evaluated by students and tutors. The decision for course revision is made on the basis of this Evaluation Report.
Pedagogical standards and Academic quality of Course and Programme as approved by the Executive Committee is the responsibility of The Council of Professors.

Media Methods and Technology

'Other' media are used if they are needed and functional for specific educational goals.The use of audiovisual and interactive (especially computer) programmes are increasing.
The use of TV Broadcasting is restricted to Information, Public Relations and Study Advice (educational use of broadcasting on the course level is in conflict with freedom of pacing.)
The use of information technology in teaching is the main objective in the institutional research and development programme at the Ou. For this purpose the Centre for Educational Technological Innovations was established 1989/1990 with additional budget from the Government.

Norwegian Association for Distance Education - Norway

General Information

NADE - Norwegian Association for Distance Education
Gjerdrumsvei 12
N-0486 Oslo 4
Telephone 47 (2) 95 06 30
Fax 47 (2) 95 07 19
Telex 72400 fotex n-att, NADE, Oslo

Contact Person
Executive Director, Mr Reidar Roll.

Background

Distance education has an integral position within the Norwegian education system. It is organised by state recognised distance education institutions and conventional education institutions.
NADE is an Association of 19 Distance Education Institutions. In EADTU, NADE represents a Consortium of 6 institutions offering higher education at a distance. These institutions are autonomous degree granting organisations governed by special legislation.

Legal Status
1968 - NADE established as an association of recognised Correspondence Schools. It was re-organised in 1984 when membership was opened to universities and colleges active in distance education.
1986 - a Consortium for Higher Distance Education established within NADE.

Institutional Structure
NADE is governed by a Board of Directors. A body composed of representatives from the Consortium from Higher Distance Education deals with matters concerning EADTU.
The members of the Consortium are fully independent institutions with their own institutional structure and management. Members of the Consortium are:

- The NKS Foundation (private Distance Education Institution)
- The NKI Foundation (private Distance Education Institution)
- The University of Oslo
- The University of Tromsø
- BI - The Norwegian Management School (Private Foundation)
- Finnmark Research Center
- SOFF - The Norwegian Executive Board for Distance Education at University and College level.

Budget Level and Sources of Income
Varies according to Institution. Universities 100% State funded with additional funding also through course fees.

Student Profile

No statistics of students are available, but the number of programmes and students are growing.

Student Characteristics
Average age: Most students are in the 25 - 40 years age group.
Most students are employed and study part-time.

Course Offers / Profile of Studies

Several areas of study are covered
Management and Business Studies
Marketing
Law
History
Mathematics
Computer Science
Engineering
Environmental Protection
and a range of shorter continuing education courses.

The University of Tromsø also offer some post-graduate programmes: History and Nordic Studies.

Course / Programme Structure
Programmes are of modular structure and multi-functional eg. undergraduate programmes are also used as continuing education programmes. The modules are usually offered as single courses and not as complete degree programmes.
Study Load: Undergraduate level programmes are defined in Credit Points. 20 credit points are equivalent to 1 years study. In distance study programmes the study load is normally 10 credit points per year.
Requirements: University entrance qualifications are required as in traditional university studies. However some programmes are open and the institutions can offer exemptions on an individual basis.
Enrolment: January and August/September – usually offered once or twice during the year but some programmes offer continuous enrolment.
Assessment: Correction of written assignments (compulsory), written examinations of course modules and/or complete programme. Grades are normally given on the basis of written examinations. The number of assignments and arrangement for correction vary considerably.
Fees: Course fees from students cover the greater part of costs. State support and subsidy from institution's budgets vary but usually cover only a minor part of total costs.

Course Delivery and Student Support

Principal teaching medium is of specially prepared self learning printed material. Correspondence.
Standard Course Package: Printed material in the form of textbooks, study guides and notes or specially prepared materials of self study.
Costs: Most programmes of 10 credit points cost between 5000-12000 NKR dependent on programme and institution.
Complementary Course Material: Television and Radio, Audio & Video cassettes, Computer programmes on PCs or mini-computers, CAI.
Interactivity: Varies between institutions/programmes. Most common: Correspondence, face-to-face tuition, telephone and audio conferencing, computer mediated communication, video conferencing, telefax.
Student Support: Telephone tutoring and counselling, regular local classes every week or as short seminars organised at a central location. Local support is often organised by co-operation with local school authorities or voluntary study organisations.

Course Development and Production

The course creation and production processes vary between institutions. Some using ordinary textbooks and little additional course material in the form of study notes provided by the faculty while others prepare extensive multi-media materials specifically designed for distance studies. Such self learning/study materials are written by a faculty or by contracted authors. In these institutions authors have support from in-house editorial, and education technology and production specialists.
Co-operation exists between consortium institutions and traditional universities and colleges of higher education in collaborative course production.
Considerable Institutional investment.
Government subsidy: 8 million NKR

Media Methods and Technology

Institutions have extensive administrative computer systems designed for distance education, particularly NKS & NKI. In addition to print technologies and postal communications the following are used:
The Norwegian Broadcasting Corporation and Norsk fjernundervisning (NFU) co-operates with distance teaching institutions in multi-media programmes.
The Norwegian Telecom offer co-operation with audio and (two way) video conferencing and experiments with video telephone.

NKS,NKI and NFU has established SEFU – The National Center for Distance Education – which organise several research and development programmes concerning distance education and related new technology.

Television: satellite distribution (cheaper and more efficient in reaching target groups); National Broadcast Television.

Computer mediated communications is widely used, eg. PortaCOM by NKS & University of Oslo while NKI has developed its own software EKKO.
Audiographics is used on an experimental basis in individual distance tutoring.

Level of investment in media and particularly Technology development eg. NKS/NKI (1989) 4-5million NKR, Government subsidy 1,000,000 NKR.

NADE institutions are involved in several European programmes and networks eg. SATURN, JANUS project, and are partners in COMETT II.

Universidade Aberta - Portugal

General Information

Universidade Aberta
Rua da Escola Politécnica 147
1200 Lisoa
Portugal
Telephone 351 (1) 673351
Telex IPED 16129 P
Fax 351 (1) 673229

Contact Person
Rector, Professor Armando Rocha Trindade
Information Officer for International Affairs, Dr Judite Nozes

Background

Univ Ab is the National Distance Teaching University and part of the national higher education structure of Portugal. Universidade Aberta is depending from the Ministry of Education, with scientific, pedagogic/ didactic, administrative and financial autonomy.

Legal Status
1980 - Initially a Directorate-General of the Ministry of Education designated as the 'Instituto Português de Ensino a Distância';
1981 - the Institute moved from pure to applied research in studies of - Pedagogy in Distance Education and Educational Technology and use of Media;
1987 - designated Project Universidade Abert;
1988 - created by governmental decree as a collective entity with statute law and full university status covering the entire national territory.

Institutional Structure
Centralised Academic, Administrative and Student Support with Decentralised Student Support at Study Centres.
Univ Ab Central Organisations:
1 *Governing Organs*
Rector, Scientific Council, Pedagogic Council and Administrative Council.
2 *Academic Structure*
The academic side of Univ Ab is called Instituto Português de Ensino a Distância comprised of two departments, Unit of Higher Education (Cultural Issues, Pedagogy and Technology, Modern Languages, Portuguese History and Culture and Portuguese Language and Literature.), Unit of Research - Documentation Centre and Research Centre of Distance Education
3 *Teaching and Research Structures*
Centralised structures include - Unit of Higher Education and Unit of Research. Decentralise network of Regional Study Centres.
4 *Administrative Structures*
Administrative Council, Administrative Services comprising Financial Dept, (Accounting, Budgeting) and Personnel Dept. (Purchase and Inventory).
Academic Services, Organisation and Logistics Dept.

Budget Level and Sources of Income
State funded - (20% self generated funding)

Student Profile

Total number of students registered
1990 - 4500

Student Characteristics
Average age - 32 years
Female students - 54% Male students - 46%.
Employed - 92% have work
Number of students in degree courses - 4500

Student Numbers distributed over Subject Areas
Educational Sciences - 4100
Humanities - 400

Course Offers / Profile of Studies

Subject Areas Taught
In Service Training Courses in the Educational Sciences (15 Courses)
Graduation in Modern Languages and Literature (17 Courses)
Non-formal Language Course - English/French
In Service Training
Non-formal Courses in production: Arcipelago (collaborative production Portugal/Spain/Greece.
Estimated Student Nos 1991 - 150) and
Rural Telecentres (Estimated Student Nos 1991 - 1000)

Programme / Course Structure
Undergraduate, Post Graduate and Continuing Education programmes available. Structure - yearly.
Study Load: 50% of full-time study; 800 study hours p.a.
Requirements: Entry qualifications - completion of full secondary level course or for students over 25, the possibility of sitting an examination awarding entry qualifications.
Enrolment: Dependent on the dates courses begin - Students generally enrol 2 months before. There are no restrictions on student numbers for enrolment.
Assessment: Continuous assessment and a final examination.
Univ Ab university qualifications are equivalent to the other traditional Portuguese universities.
Fees: Symbolic - annual fees are approximately 40 ECU.

Course Delivery and Student Support

Principal Teaching Medium: Written material (self learning/study material).
Standard Course Package: written materials, audio programmes and video programmes.
Cost: Written materials – average 15 ECU
Complementary Course Material: Radio and TV Broadcasts
Interactivity: correspondence, telephone tutoring by subject university assistants, Study Centres.
Student Support: Universidade Aberta has been developing a support Network based on three different subsystems: Mail and Fax (delayed) counselling and scientific and pedagogical support (centralised); Telephone (direct) Counselling and Tutoring support (centralised). Study Centres - decentralised in 22 major population centers where students may obtain face to face counselling and support. Primary Centres are located in Universities and Polytechnic Institutes in Portugal and in the islands of Azores and Madeira. They are equiped with fax, telephone, audio and video equipment, and all multimedia materials produced by the Univ Ab.
Secondary support centres make use of regional resources, eg. local libraries. They are material resource centres without teaching teams.

Course Development and Production

Each subject is the responsibility of a Team comprising a professor (a recognised expert in the field usually contracted for that specific purpose from another university), an educational technologist from Universidade Aberta and a Producer. Overall approval of the Course lies with the Head of the Unit of Higher Education and with the Scientific Council.

Production of Courseware: Univ Ab has full autonomy in production of audio, video, and script materials. Final printing of text is normally sub-contracted to outside sources.
As yet no courses have been produced which require significant experiment or laboratory activities.

Media Methods and Technology

Media mix: written materials, radio and television broadcasts, audio and video cassettes. Learning and training objectives are explicitly presented in the written materials.

Beside projects supported by the EC there are in the 'Distance Teaching Research Centre' other programmes and developments related to media and technology with emphasis on:
– One Media Communications: Computer; databases for media and technology terminology as well as for subjects demanded by EURODICAUTOM - Luxembourg textual lexicometric analysis under the orientation of CNRS-INaLF, URL-3; Computer-based learning/training (provicie0).

Television: Broadcasting, satellites, interactive video; Audio;radio and video cassettes, telephone.

– Multimedia Communications: OLE project (DELTA); COSTEL project (COMETT II); ERCI I & II (LINGUA);

Universidad Nacional de Educación a Distancia - Spain

General Information

Universidad Nacional de Educación a Distancia
Ciudad Universitaria
28.040 Madrid
Spain
Telephone 34 (1) 5493600
Fax 34 (1) 5491486
Telex 47844 UNED E

Contact Persons
Prof .Dr. J.L.García, Garrido, Vicerrector de Ordenación Académica y Profesorado
Dr.T.Gibert, Director of International Relations
Telephone 34 (1) 2441524
Fax 34 (1) 5491986 or 5446813
Telex 45256/47844 UNED E

Background

UNED is a Distance Teaching University and part of the regular University structure in Spain. It is an autonomous degree granting institution teaching solely at a distance.

Legal Status
Established - August 4th., 1970 by the Ley General de Educación;
Formally constituted - August 18th .,1972 ;
Administrative and Academic Structure determined and financial and legal autonomy defined in 1984 by the Ley de Reforma Universitaria.

Institutional Structure
Centralised academic and administrative structures. Decentralised student support at Study Centres (72 including 8 in overseas territories).

UNED's Central Organisation:
1 *Governing Organs*
Consejo Council, Claustro, Junta de Gobierno, Rector
2 *Academic Structure*
Faculties (9), Departments (48) ,Academic staff (790)
3 *Teaching and Research Support Structure*
a University Institute for Distance Education (IUED)
b Audio-visual Media Production and Design Centre (CEMAV)
c Centre for the Production of Printed Materials.
4 *Administrative Structure*
Management, Legal and Financial, Study Centres, Students.

Budget Level and Sources of Income
1990 - 7,716,395,000 Pesetas
40% Government contribution
60% Student Fees.
All Study Centres are funded by regional business concerns.

Student Profile

Total number of students (Degree and Continuing Education)
1980/81 - 63259
1989/90 - 109041

Student Characteristics
Average age (1988/89) - 30 years
Employed - 70.5%
Unemployed - 9.2%
Studies only - 17.5%

Number in degree courses - 27.7%
Continuing Education - 63.3%
Transfer - 9.0%

Student Numbers Distributed over Subject Areas
Law - 21702
Geography and History - 6181
Philology - 2212
Philosophy/Education - 7015
Psychology - 9738
Economics - 9116
Science - 3457
Industrial Engineering - 1471
Politics and Sociology - 2423
Total number in degree courses - 63315

Continuing Education
Access - 19806
Nursing - 8921
Teaching - 3160
Open Access - 2759
Total number continuing education - 34645

Total Number of Students
taking Courses eg. 1989 - 97960

Course Offers / Profile of Studies

Over 400 Courses (some compulsory in a carrera) are offered in Continuing Education and Faculties of Law, Geography and History, Philology (Hispanic), Philosophy and Educational Sciences(Pedagogy), Psychology, Economics and Business Studies, Sciences (Physics,Mathematics, Chemistry), Industrial Engineering, Politics and Sociology.

Postgraduate Programmes: Programmes of the Third Cycle.
Continuing Education: Foundation Courses (for Students over 25 years of age), Open Distance Teaching Programme, Professional Improvement Courses – Health and Education.

Course/Programme Structure
14 Study Programmes(carrera) are offered of about 25 courses (asignaturas) each. A programme takes 5-6 years to complete. Post graduate programme is a 2 year taught phase of 32 credits(transferable to other Spanish Universities) - 2-5 years duration.
Study Load: Measured in Study Years. No fixed formula for study hours.
Requirements: Access is open to students holding 'Bachillerato' status or to successful completion of the 'Foundation Course'.
open access to the Open Distance Teaching Programme - no pre-entry requisites.
Enrolment: Fixed. Advertised in Newspaper and Radio - Sept/Oct. The academic year runs from October to June.
Assessment: Examinations are held in February with final examinations in June. Additional resit examinations - September.
Assignment submissions: 4 times during the year.
Credit exemption and transfer available between all Spanish Universities, including UNED.
Fees: Non-experimental Courses 43882 Ptas per year (1991). Experimental Courses 62162 Ptas per year (1991).
Financial assistance is available from Scholarships offered by UNED on the basis of, academic achievement, genuine financial need,professional status, certain categories of students are exempt or given assistance in payment of fees.

Course Delivery and Student Support

Principal Teaching Medium: Comprised of printed course material (Carefully designed, interactive).
Standard Course Package: Specially prepared self instructive learning material(unidades didacticos), Course Texts/Book, and audio cassette, purchased in any Study Centre or selected Bookshops.
Cost: About 4000-5000 Ptas.
Complementary Material: Radio, video, Kits for practical work, Newspaper.
Interactivity: Correspondence, telematica, computer assisted learning, face to face tuition, weekend and residential schools.
Student Support: Telephone Tutoring and Counselling available from Central Organisation and directly from Study Centres.

Study Centres which are funded by local and regional business concerns provide a venue for research, workshops, conferences, meetings, and cultural activities.The Centres contain libraries, micro-computers, and play back laboratories for audio-visual materials as well as facilities for 'experiments'.
UNED has 56 Study Centres, 27 subcentres and 8 Study Centres in overseas territories.

Course Development and Production

Development responsibilities lie primarily with the university teachers and ultimate approval of the Department Council and the Comisión de Metodología y Medios de la Educación a Distancia.
About 50% of such material is produced by Teams.
Pedagogical standards are maintained by quality control at faculty level.
Production of Courseware: Teaching materials are designed and produced centrally but delivered decentrally to home or workplace. Desktop publishing by UNED teaching Staff with support from outside publishing houses.
Teaching materials are revised by a panel of experts although teachers academic freedom is respected.
Nature of Costs: Study Units - 20% to Author, 30% Editing and storage, 50% Distribution. Open Learning and complementary materials ie Information Guide, Brochures etc. - 10% Author, 40% Editing and storage, 50% Distribution. All books incur 12% VAT.

Media Methods and Technology

The UNED carries out every stage of radio programme production, video and audio tapes using its own facilities and staff. Programmes are broadcast two and a half hours a day (Mon - Fri) on the national radio station and other stations.

The Audiovisual Media Design and Production Centre include the following Departments: Radio, Post-production, Video, Archives and Documentation, Technical and Maintenance,Studies and Projects, Distribution and Administration.

Projects currently include: Videotext, Educational Television,participation in the OLYMPUS project.
The Electronic Mail and Videotext Service Centre Pilot Project and Videotext User Equipment CSED Project are co - financed by the EEC and the Spanish Telecommunications Office.
UNED collaborates in the following projects also: EC. ERASMUS, ESPRIT II, STAR, COMETT II.

Swedish Association for Distance Education - Sweden

General Information

SADE - Swedish Association for Distance Education
University of Umeå
S - 901 87 UMEÅ
Telephone 46 (90) 16 50 00
Fax 46 (90) 16 66 85
Telex 540 05 UNIVUME

Contact Person
Mr Per Eklund,
SADE Swedish Association for Distance Education.
Mr Dan Brändström,
Head of Administration SADE, Section for Higher Education.

Background

SADE is an Association for Distance Education institutions whose members are either individuals interested in distance teaching or various institutions including 14 universities and university colleges that offer higher education at a distance.
All of these Universities are degree granting state Institutions recognised by the Swedish Government. Distance Education is an integrated, departmental activity in these dual - mode universities mostly on a small scale.

Legal Status
Post-secondary distance education offered on an experimental basis – 1973 – and is now a well established university undertaking.
SADE established with Association status in1984.
A special section for Higher Education was also established to enable representation of appropriate SADE member institutions in EADTU.

Institutional Structure
As a ruling (and statutory) principle of Swedish higher education 'all institutions of higher education are to be organised so as to ensure a fair geographical and social distribution of educational opportunities and to further recurrent education'.

Post secondary distance education is characterised by a highly decentralised system. Institutional structures, production and delivery systems differ from university to university.

Every department whose programme includes distance teaching is independently responsible for this activity.

There is no central control of distance education and nor does the individual university impose any restrictions on the liberty of the individual department to organise its distance teaching. Distance teaching forms an integral part of departmental activities and as such a 'distance teacher' normally has 'conventional' teaching duties as well.

Budget Level and Sources of Income
100% State funded through Parliament.

Student Profile

Estimated Numbers of Students registered
1990 - 14000

Over 35% of Sweden's adult population pursues studies in one form or another.
Most are employed (an inmportant factor in this context is the almost unconditional right of Swedish employees to study leave).

Course Offers/Profile of Studies

Dominated by separate courses rather than full length study programmes. However, increasingly, full study programmes are offered in the form of Distance Education. A degree programme can consist of on campus traditional courses as well as DE courses.

1989 course offers in Distance Education - 500 self-contained courses and 43 Study programmes, eg.
University of Umea - 117 courses
Uppsala University - 71
Lulea and Växjö University Colleges - offering 30 courses each.

Representation of different academic disciplines and faculties vary considerably. Distance Education Courses include:
Social, Political and Behavioural Sciences - about 33%
Mathematics
Natural Sciences
Liberal Arts and Languages
Technology is well represented.

Study Load: Usually 50% normal full-time university requirements.
Requirements: Access, enrolment and registration is as per individual traditional university policy.
Fees: No Fees, though the student is required to pay for the literature and for all personal travel expenses to course meetings.

Course Delivery and Student Support

Principal Teaching Medium: Printed material (study guides, written assignments etc.).
Standard Course Package: Special interactive, self-learning material including reading instructions, study or review questions and guide. Material is structured into more of less strictly defined study units and complementary to off-the-shelf traditional books.
Costs: No costs involved to the student.
Complementary Course Material:Audio cassettes, video, CAL etc.
Interactivity: Correspondence, telephone (Telephone costs are borne by the institution), Electronic mail, fax and course meetings.
Student Support: It is a feature of the evolving system that students and teachers come together for course meetings and intensive teaching sessions on campus a few times per half term.The meetings cover 1-3 days and include lectures, classes,group work, study visits and social activities. The importance of continual and direct student-teacher communications is recognised.
There is growing establishment of off-campus Study Centres which provide access to equipment and libraries, and where tutoring and counselling services are provided.

Course Development and Production

Please refer to Institutional Structure. General development responsibilities rest at a departmental level. Course are created by regular staff with the help of media experts. Desk Top publishing is widely used in course production.

Media Methods and Technology

Apart from printed material the following media and technologies are used:

Widely Used
Video and Audio Cassette, Telefax.

Radio and Television
Apart from small-scale highly decentralised distance teaching provided by universities, tuition is also provided by the Swedish Education Broadcasting Company (UR) which collaborates with higher education units and undertakes joint ventures, eg. with LiberHermods, which supplement URs broadcasts with correspondence material.

Computers
Both for electronic mail, course production, computer conferencing, simulation and tutor marked assignments(commenting on student written assignments).

In some university courses students are provided with portable computers. Local Study Centres all have computers for teaching and learning activities.

Interactive Video
Interactive Video is rarely used in Sweden.

Investment is currently directed towards computer technology and teleconferencing.

The Open University of the United Kingdom

General Information

The Open University
Walton Hall, Milton Keynes, MK7 6AA, UK.
Telephone 44 (0)908 74066
Telex 825061) U WALT G
Fax 44 (0) 908 653744

Contact Person
Mr. G. Martin, European and International Development
Telephone 44 (908) 653 052
Fax 44 (908) 652 022

Background

The UKOU is an Open University and part of the National Higher Education Structure governed by Royal Charter or by Act of Parliament. It is an independent and autonomous institution authorised to confer its own degrees.

Legal Status
Established by Royal Charter in 1969. Formally constituted in 1971.

Institutional Structure
Centralised Academic and Administrative function.
Decentralised student support at Study Centres (260 in number).
The UKOU Central Organisations:
1 *Governing Organs*
Council-management, Senate-Academic, Vice-Chancellor
2 *Academic Structure*
Academic Board, Faculties, Departments.
3 *Teaching and Research Support Structure*
a Institute of Educational Technology:
- Centre for Information Technology in Education
- Student Research Centre
- Teaching and Consultancy Centre

b Research – 32 groups including – Petrogenisis Research Group, Brain Research Group, Computer Assisted Learning, Human Cognition Research Laboratory.
c International Center for Distance Learning
4 *Adminstrative Structure*
Management, Finance, Legal, Regional Administration.

Budget Level and Sources of Income
1990 - £ 107 million
66% Government Funded (via D.E.S. recurrent grant)
26% Fee Income
8% Research and Other Income (ie sale of material).

Student Profile

Total number of Students registered
(Dec)1990 - 96931

Student Characteristics
Median age - 34 years
Numbers in Degree Courses - 71018
Postgraduate - 3511
Continuing Education:
Deg. & Adv Diploma Courses - 10703
Professional & Postgraduate Courses - 11699

Student Numbers Distributed over Subject Areas
Arts - 21.7%
Social Sciences - 21.5%
Education - 4.6%
Mathematics - 17.6%
Technology - 18.3%
Science - 13.8%

Course Offers / Profile of Studies

Undergraduate Programme: 130 courses available in the Faculties of Arts, Mathematics, Science, Social Science, Technology and from the School of Education and Open Business School.
Postgraduate: Mathematics, Advanced Educational and Social Research Methods, Education, Literature, Industrial Application of Computers, Manufacturing, and Business Administration.
(Full details appear in the research Degree Prospectus and Student Handbook.).
Continuing Education: Wide varieties of courses are comprised of this programme - Open Business School, Management, Scientific and Technology Updating, Professional Development in Education, Community Education, Health and Social Welfare, Personal and Cultural Education. (Courses and Packs are frequently developed by the Centre for Continuing Education in collaboration with other institutions.)

Course / Programme Structure
Characterised by open Admission on a basis of, 'first come, first served' with quotas to ensure courses are not oversubscribed. 'New' students confirm registration after 2 months initial study.
Study Courses are tightly structured in terms of pacing. Assignment dates are strictly adhered to. Assessment: A three hour examination concludes the Course.
Freedom of place and time of study are offered though compulsory attendance for face to face tuition is a requirement for many courses, ie. weekend or summer school.
Study Load: Courses are spread over 32-34 study weeks. A full Credit Course assumes 12-14 study hours

per week. An undergraduate course profile comprises 42 full credits and/or 94 half credits.
Requirements: Degree Programme - Open Access to those 18 years+ and resident in the UK.
Continuing Education - to those 18 years+ resident in UK, Benelux Countries, Ireland and BFPO addresses in Europe.
Enrolment to Degree Course: Feb-Nov. New students apply before Sept of the previous year and are conditionally registered in May/June for courses they wish to study the following year.
Continuing Education Courses: Applications May to October for courses in Feb & Nov.
Short Courses begin at different times during the year.
Fees 1991: Degree full credit £218, 1/2 credit £109, Summer School fee £145. Course fee covers all material costs.
Financial assistance obtainable from: Local authorities for Summer Schools and travel and University's Financial Awards Committee for unemployed and those of modest means.
Computer leasing Scheme @ £196 pa. for student without access to a PC.

Course Delivery and Student Support

Principal Teaching Medium: Written (integrated, self instructive) material, with TV. and Radio broadcasts on national BBC Network.
Standard Course Package: Different Media are included in an integrated and self instructive form. Dependent on the Course, a Package includes - text/self assessment material, recommended books, specially prepared readers, specially designed home expriment kits (on a number of courses), video and audio cassettes.
Costs: Included in Fees.
Complementary Course Material: Broadcast TV. and Radio, Home Computing.
Interactivity: Correspondence, Residential Schools, face to face tuition at Study Centres, Computer aided instruction and assessment.
Student Support: Tutoring through Study Centres though attendance not compulsory. Telephone tutorials are used where face to face is uneconomical. Counselling through Study Centres.
Study Centres are located in 13 regions(some 250 spread throughout the UK). Based at local colleges, Study Centres offer meeting facilities, tutoring, counselling, direct contact with fellow students, use of computer terminals, Residential/Summer School venue and face to face tuition where required.

Course Development and Production

New courses are normally developed within Faculties. A Course Team is created and the Course proposal written with approval at faculty level. Onward transmission of the proposal includes: Course Resour..es Committee; Course Development Committee: Broadcast and Audiovisual Committee; Residential Schools Committee and Academic Board. Patterns of Development vary considerably between faculties and is different again for Post Graduate & Continuing Education Courses which must be self financing.
Use of Staff: A course Team is comprised of OU. academics with consultant course writers where required - editor, designer, regional staff tutor, educational technologist and other specialist staff. Drafts written by individuals are ammended and rewritten in light of Team comment. Radio and TV are made by BBC/Open University Production Center producers who are subject specialist trained in production techniques.
Pedagogical and Academic quality is maintained by a system of external assessment for every course developed.
Production of Courseware: Design and editing are completed in - house but printing is undertaken outside the OU.
Costs vary tremendously and are dependent on multiple variables.

Media Methods and Technology

The main teaching at the UKOU involves text and television/video. Other media used on a relatively wide scale include:
Computer use: Home computing, low-spec MSDOS - subsidised but considered unrealistic to extend to widespread use across the whole university. Use continues at Summer and Residential Schools.
Computer mediated communications: Computer conferencing, electronic mail, bulletin boards etc.
Audio conferencing. Radio. Interactive Video.
Media under investigation: Satellite television - Eurostep, Channel e.; Interactive audio-graphics; Hypermedia.
Despite the many Teaching and media support systems operating there is in the area of Information Technology applied to Education and Training in a European Context, a constant group of 5-6 working closely together on many projects.

A special relationship exists with the BBC in TV productions with the BBCOU Team an integral part in all Course Development structures.

The UKOU collaborates in the following projects: EC, DELTA, COMETT II, ASAP, JANUS, PRECISE, AAT, ESM-Base and ESPRIT.